



PORON® Polyurethanes



Authorized Distributor,
Converter, and Fabricator
www.jbc-tech.com

Elastomeric Material Solutions
www.rogerscorp.com

Typical Product Properties

PORON® 4701-50 Firm – Thin as Cast – Data Sheet

PROPERTY	TEST METHOD	VALUE
PHYSICAL		
Density, kg/m ³ (lb./ft ³) Tolerance, %	ASTM D 3574-95, Test A	480 (30) ± 10
Thickness, mm (inches) Tolerance, mm (inches)		0.43 – 0.50 (0.017 - 0.020) 0.08 (± 0.003)
Standard Color (Code)		Black (04)
Compression Force Deflection Range kPa (psi) Typical kPa (psi)	0.51cm/min (0.2" / min). Strain Rate Force Measured @ 25% Deflection	103 – 310 (15 – 45) 221 (32)
Hardness, Durometer, Shore "O"	ASTM D 2240-97	55
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)	5 10 5
Dimensional Stability, % max. change	22 hrs @ 80°C (176°F) in a forced-air oven	± 1
Tensile Strength, kPa (psi), min	ASTM D 3574-75 Test E	1106 (160)
Tensile Elongation, % min.,	ASTM D 3574-75 Test E	90
Tear Strength, kN/m (pli) min Typical kN/m (pli)	ASTM D 264-91 Die C	1.6 (9) 4.4 (25)
ELECTRICAL AND THERMAL		
Dielectric Constant, K' ("DK")	ASTM D 150 measurements at 22°C (72°F) relative humidity 50% for 24 hrs.	1.63
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	2 x 10 ¹² (7.87 x 10 ¹¹)
Surface Resistivity, ohm/sq.	ASTM D 257-99	7 x 10 ¹²
Thermal Conductivity, W/m-C (BTU-in./hr/ft ² -F)	ASTM C 518-98	-
Coefficient of Thermal Expansion		2.3 - 3.1 x 10 ⁻⁴ in/in/°C (1.3-1.7 x10 ⁻⁴ in/in/°F)

The information contained in this Data Sheet is intended to assist you in designing with Rogers' Elastomeric Material Solutions. 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 or that the results shown in this Data Sheet will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers PORON Polyurethane Foam Materials for each application. The Rogers logo, Helping power, protect, connect our world, and PORON are trademarks of Rogers Corporation or one of its subsidiaries. © 2000, 2001, 2002, 2003, 2008, 2017 Rogers Corporation, All rights reserved. Printed in U.S.A., 1217-PDF, Publication #17-026

PORON® 4701-50 Firm – Thin as Cast, Continued

PROPERTY	TEST METHOD	VALUE
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	-40°C (-40°F)
Cold Flexibility	MIL-P-12420D 1991 @ -40°C (-40°F)	Pass
FLAMMABILITY AND OUTGASSING		
Flammability, mm (inches)	UL 94HBF (File E20305) (Pass ≥) MVSS 302 (Pass ≥) CSA Comp HBF (File 188149) (Pass ≥)	- 1.1 (0.045) -
Fogging	SAE J-1756 3 hrs @ 100°C (212°F)	-
Outgassing, Total Mass Loss (TML) %	ASTM E 595-93 24 hrs @ 125°C (257°F) @ <7kPa (1.02psi)	0.9
Outgassing, Collected Volatile Condensable Materials (CVCN) %		0.06
Outgassing, Water Vapor Regain (WVR) %		0.43
ENVIRONMENTAL		
Gasketing and Sealing	UL JMST2 (Consisting of UL50 and UL508) CAN/CSA – C22.2 No. 94-M91	File MH15464
Water Absorption, High Humidity Exposure, % weight gain, typical	AMS 3568-95	2
Water Absorption, Immersion Testing, % weight gain, typical	ASTM D 570-95	5
UV Resistance	ASTM G 53-96	Good
Ozone Resistance	GM 4486P-95	Pass
Corrosion Resistance	AMS 3568-91	Pass
Mildew/Bacteria Resistance	ASTM G 21	Good
Staining	ASTM D 925	No Stain

Notes:

- - 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.

The information contained in this Data Sheet is intended to assist you in designing with Rogers' Elastomeric Material Solutions. 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 or that the results shown in this Data Sheet will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers PORON Polyurethane Foam Materials for each application. The Rogers logo, Helping power, protect, connect our world, and PORON are trademarks of Rogers Corporation or one of its subsidiaries. © 2000, 2001, 2002, 2003, 2008, 2017 Rogers Corporation, All rights reserved. Printed in U.S.A., 1217-PDF, Publication #17-026