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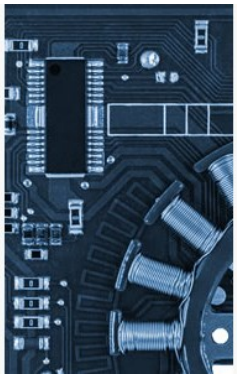

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ABOUT OUR COMPANY

Dr. Dietrich Müller GmbH is a global solution provider for electrical insulation materials, thermally conductive products, seals and technical films.

We advise on the selection of the right material and manufacture precision parts from flexible and rigid materials. We operate 6 sites and provide services to companies around the world.

We are ISO 9001 and ISO 14001 certified and UL listed as a repackager (E341377).

Product Data Sheet

poron® ALWAYS THERE

PORON® AquaPro® 4701-41
Soft - Enhanced Sealability

PROPERTY	TEST METHOD	TYPICAL VALUE		
PHYSICAL				
Density, kg/m³ (lb./ft³)	ASTM D3574-95, Test A	240 (15)	320 (20)	480 (30)
Tolerance, %			± 10	
Thickness, mm (inches)		4.78 - 12.7 (0.188 - 0.500)	1.57 - 3.18 (0.062 - 0.125)	0.79 - 1.14 (0.031 - 0.045)
Tolerance, %		± 10	± 10	± 20
Standard Color (Code)			Black (04)	
Compression Force Deflection, kPa (psi)	0.51cm/min (0.2"/min) Strain Rate Force Measured @ 25% Deflection	41 - 83 (6 - 12)	76-183 (11-20)	138-317 (20-46)
Typical kPa, (psi)		69 (9.3)	103 (15)	193 (28)
Hardness, Durometer Shore O	ASTM D2240-97	18	24	55
Compression Set, % max After 24 hour Recovery	ASTM D3574-95 Test D @ 23°C (73°F) ASTM D3574-95 Test D @ 70°C (158°F) ASTM D3574-95 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		± 2	
Tensile Strength, kPa (psi) min.	ASTM D3574-75, Test E	276 (40)	517 (75)	827 (120)
Tensile Elongation, % min.	ASTM D3574-75, Test E		100	
Tear Strength, kN/m (pli) min.	ASTM D264-91 Die C	1.1 (6)	1.4 (8)	2.6 (15)
Typical kN/m (pli)		1.8 (10)	2.3 (13)	3.2 (18)
ELECTRICAL & THERMAL				
Dielectric Constant, K' ("DK")	ASTM D150 Measurements at 22°C (72°F) Relative Humidity 50% for 24 hrs.		1.71	
Dielectric Strength, kV/m (volts/mil)	ASTM D149-97a		1969 (50)	
Dissipation Factor, tan D ("DF")	ASTM D150-98		0.05	
Volume Resistivity, ohm-cm	ASTM D257-99		1×10^{12}	
Surface Resistivity, ohm/sq	ASTM D257-99		2×10^{12}	
Thermal Conductivity, W/m-C (BTU-in./hr/ft²-F)	ASTM C518-98		-	
Coefficient of Thermal Expansion			$2.3\text{-}3.1 \times 10^{-4}$ in/in/°C ($1.3\text{-}1.7 \times 10^{-4}$ in/in/°F)	

ROGERS CORPORATION

PROPERTY	TEST METHOD	TYPICAL VALUE		
TEMPERATURE RESISTANCE		240 (15)	320 (20)	480 (30)
Recommended Constant Use, max.	SAE J-2236		90°C (194°F)	
Recommended Intermittent Use, max.			121°C (250°F)	
Embrittlement	ASTM D746-98		-	
Cold Flexibility	MIL-P-12420D 1991 @ -40°C (-40°F)		Pass	
FLAMMABILITY AND OUTGASSING				
Flammability, mm (inches)	UL 94HBF‡ (File E20305) (Pass ≥) FMVSS 302 (Pass ≥) CSA Comp HBF (File 188149) (Pass ≥)		4.8 (0.188) - -	
Fogging	SAE J-1756 3 hrs @ 100°C (212°F)		-	
Outgassing, Total Mass Loss (TML) %	ASTM E595-93 24 hrs @ 125°C (257°F) @ <7 x 10^3 Pa	0.84	0.97	1.0
Outgassing, Collected Volatile Condensable Materials (CVCM) %		0.05	0.04	0.06
Outgassing, Water Vapor Regain (WVR) %		0.4	0.46	0.65
ENVIRONMENTAL				
Gasketing & Sealing	UL JMST2 (Consisting of UL50 & UL508) CAN/CSA - C22.2 No. 94-M91		File MH15464 File 188149	
Moisture Absorption, High Humidity Exposure, % Weight Gain, Typical	AMS 3568-95		3	
Water Absorption, Immersion Testing, % Weight Gain, Typical	ASTM D570-95	15	13	6
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	
Skin Contact Irritation	Primary Skin Irritation Test (FHSA)		Pass	

Notes:

‡Designed to meet UL 94 HBF based upon 2022 test criteria. As of 2023 items with nominal density ≥ 15.6lb/ft^3 (250kg/m^3) 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.

To order PORON materials, please contact our Sales Specialists at 860.928.3622 or via email at EMS_CT_cust_serv@rogerscorporation.com