

Typical Product Properties

PORON® AquaPro™ 4701-41 Soft – Enhanced Sealability- Data Sheet

PROPERTY	TEST METHOD	VALUE		
<b>PHYSICAL</b>				
Density, kg /m <sup>3</sup> (lb. / ft <sup>3</sup> ) Tolerance, %	ASTM D 3574-95, Test A	240 (15)	320 (20)	480 (30)
		± 10		
Thickness, mm (inches) Tolerance, %		4.78 – 12.70 (0.188-0.500)	1.57 – 3.18 (0.062- 0.125)	0.79 – 1.14 (0.031-0.045)
		± 10		± 20
Standard Color (Code)		Black (04)		
Compression Force Deflection, kPa (psi) Typical, kPa (psi)	0.51 cm/min (0.2" / min.) Strain Rate Force Measured @ 25% Deflection	41 – 83 (6 – 12) 64 (9.3)	76 – 138 (11 – 20) 103 (15)	138 – 317 (20 – 46) 193 (28)
Hardness, Durometer, Shore "O"	ASTM D 2240-97	18	24	55
Compression Set, % max. after 24 hour recovery	ASTM D 3574-95 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	± 2		
Tensile Strength, min. kPa (psi)	ASTM D 3574-75 Test E	276 (40)	517 (75)	827 (120)
Tensile Elongation, % min.	ASTM D 3574-75 Test E	100	100	100
Tear Strength, Min. kN/m (pli), Typical kN/m (pli)	ASTM D 264-91 Die C	1.1 (6) 1.8 (10)	1.4 (8) 2.3 (13)	2.6 (15) 3.2 (18)
<b>ELECTRICAL AND THERMAL</b>				
Dielectric Constant, K' ("DK")	ASTM D 150 measurements at 22°C (72°F) relative humidity 50% for 24 hrs.	1.71		
Dielectric Strength, kVm (volts/mil)	ASTM D 149-97a	1969 (50)		
Dissipation Factor, tan D ("DF")	ASTM D 150-98	0.05		
Volume Resistivity, ohm-cm	ASTM D 257-99	1 x 10 <sup>12</sup>		
Surface Resistivity, ohm/sq.	ASTM D 257-99	2 x 10 <sup>12</sup>		
Thermal Conductivity, W/m-C (BTU-in./hr/ft <sup>2</sup> -F)	ASTM C 518-98	-	-	-
Coefficient of Thermal Expansion		2.3-3.1 x 10 <sup>-4</sup> in/in/°C (1.3-1.7x10 <sup>-4</sup> in/in/°F)		

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PROPERTY	TEST METHOD	VALUE		
<b>TEMPERATURE RESISTANCE</b>				
Recommended Constant Use, max.	SAE J-2236	90°C (194°F)		
Recommended Intermittent Use, max.		121°C (250°F)		
Embrittlement	ASTM D 746-98	-		
Cold Flexibility	MIL-P-12420D 1991 @ -40°C (-40°F)	Pass		
<b>FLAMMABILITY AND OUTGASSING</b>				
Flammability, mm (inches)	UL 94HBF (File E20305) (Pass ≥)	4.8 (0.188)		
	MVSS 302 (Pass ≥)	-		
	CSA Comp HBF (File 188149) (Pass ≥)	-		
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) @ <7x10 <sup>3</sup> 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
<b>ENVIRONMENTAL</b>				
Gasketing and Sealing	UL JMST2 (Consisting of UL50 and 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 D 570-95	15	13	6
UV Resistance	ASTM G 53-96	-		
Ozone Resistance	GM 4486P-95	-		
Corrosion Resistance	AMS 3568-91	-		
Mildew/Bacteria Resistance	ASTM G 21	Good		
Staining	ASTM D 925	No Stain		
Skin Contact Irritation	Primary Skin Irritation Test (FHSA)	Pass		

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.

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