Argent

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PORON® 4701-50 Firm Thin as Cast

PROPERTY	TEST METHOD	VALUE
PHYSICAL		
Density, kg/m³ (lb./ft³)	ASTM D 3574-95, Test A	480 (30)
Tolerance, %		± 10
Thickness, mm (inches)		0.43 - 0.50 (0.017 - 0.020)
Tolerance, mm (inches)		0.08 (± 0.003)
Standard Color (Code)		Black (04)
Compression Force Deflection, kPa (psi)		
Range kPa (psi) Typical kPa (psi)	0.51 cm/min (0.2"/min) Strain Rate Force Measured @ 25% Deflection	103 - 310 (15 - 45) 221 (32)
Hardness, Durometer Shore O	ASTM D2240-97	55
Compression Set, % max	ASTM D1667-90 Test D @ 23°C (73°F)	5
	ASTM D3574-95 Test D @ 70°C (158°F)	10
	ASTM D3574-95 Test J/Test D Autoclaved 5 hrs @ 121°C (250°F)	5
Dimensional Stability, % max change	22 hrs @ 80°C (176°F) in a Forced-Air Oven	± 1
Tensile Strength, min. kPa (psi)	ASTM D3574-75 Test E	1106 (160)
Tensile Elongation, % min.	ASTM D3574-75 Test E	90
Tear Strength , min. kN/m, (pli) Typical kNm, (pli)	ASTM D264-91 Die C	1.6 (9) 4.4 (25)

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PROPERTY	TEST METHOD	VALUE
ELECTRICAL & THERMAL		
Dielectric Constant, K' ("DK")	ASTM D150 @ 22°C (72°F) Relative Humidity 50% for 24 hrs	1.63
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 (ohm-in)	ASTM D257-99	2×10^{12} (7.87×10^{11})
Surface Resistivity, ohm/sq.	ASTM D257-99	7×10^{12}
Thermal Conductivity, W/m-C (BTU-in./hr/ft^2-F)	ASTM C518-98	-
Coefficient of Thermal Expansion		$2.3 - 3.1 \times 10^{-4}$ in/in/°C ($1.3 - 1.7 \times 10^{-4}$ in/in/°F)
TEMPERATURE RESISTANCE		
Recommended Constant Use, max.	SAE J-2236	90°C (194°F)
Recommended Intermittent Use, max.		121°C (250°F)
Embrittlement	ASTM D746-98	-40°C (-40°F)
Cold Flexibility	MIL-P-12420D 1991 @ -40°C (-40°F)	Pass
FLAMMABILITY & OUTGASSING		
Flammability, mm (inches)	UL 94HBF‡ (File E20305) (Pass ≥) FMVSS 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 E595-93 24 hrs @ 125°C (257°F) @ <7 kPa (1.02 psi)	0.9
Outgassing, Collected Volatile Condensable Materials (CVCM) %		0.06
Outgassing, Water Vapor Regain (WVR) %		0.43

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PROPERTY	TEST METHOD	VALUE
ENVIRONMENTAL		
Gasketing and Sealing	UL JMST2 (Consisting of UL50 & UL508) CAN/CSA-C22.2 No. 94-M91	File MH15464 -
Moisture Absorption, High Humidity Exposure, % Weight Gain, Typical	AMS 3568-95	2
Water Absorption, Immersion Testing, % Weight Gain, Typical	ASTM D570-95	5
UV Resistance	ASTM G53-96	Good
Ozone Resistance	GM 4486P-95	Pass
Corrosion Resistance	AMS 3568-91	Pass
Mildew/Bacteria Resistance	ASTM G21	Good
Staining	ASTM D925	No Stain

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.

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