

INKSONICS DIGITAL PANELS TECHNICAL DATA SHEET

InkSonics® Digital Acoustic Panels

Hemp-core acoustical wall panels wrapped in a custom digitally-printed, acoustically transparent fabric.

PRODUCT OVERVIEW

InkSonics® Digital Acoustic Panels are the same hemp-core acoustical wall panel as Acousticalm®, wrapped in the same acoustically transparent facing fabric, carrying a custom digitally-printed image or pattern. Construction, core, mounting, and facing fabric are identical to the Acousticalm® panel; the print is applied to that same transparent fabric. Reference specification: Section 09 8433 - Sound-Absorbing Wall Units, in conjunction with AAPG InkSonics® Digital.

Core	Rigid hemp board, 6 to 7 pcf (96 to 112 kg/m³)
Panel thickness	1" (25 mm), 1-1/2" (38 mm), or 2" (51 mm)
Face dimensions	Nominal 24" x 48" (610 x 1219 mm), or as indicated
Maximum standard size	48" x 120" (1219 x 3048 mm)
Surface burning	ASTM E84 Class A (Class 1)
Sound absorption (NRC)	0.95 (NRC), tested assembly; SAA 0.94 (Riverbank RAL-A24-130)

TECHNICAL DATA

Characteristic	Technical data
Acoustical core	Rigid hemp board with a nominal density of 6 to 7 pounds per cubic foot (96 to 112 kg/m ³), framed with solid wood
Panel types	Standard absorptive; tackable; impact-resistant with high-density facing; barrier-backed with mass-loaded vinyl septum
Edge profile	Fabric-wrapped edge: square (Type A), beveled, radiused (half-round), or mitered return. Edges hardened to produce crisp, durable, square corners resistant to fraying and impact
Facing fabric	Acoustically transparent fabric wrapped fully around the panel face and edges; Guilford of Maine FR701 or Anchorage, or as selected
Printed surface	Custom digital image or pattern printed on the same acoustically transparent facing fabric used on the Acousticalm® panel; developed in house. The print is applied to the transparent wrap and does not add a separate surface layer.
Fabric fire performance	Fabric qualifies for Class A (Class 1) use when tested in accordance with ASTM E84, unadhered mounting method
Panel fire performance	ASTM E84 Class A (Class 1): flame-spread index 25 or less, smoke-developed index 450 or less. Independent test reports to be submitted
Barrier backing	Factory-laminated mass-loaded vinyl (MLV) septum where indicated. Continuous floor-to-ceiling coverage is required for effective transmission-loss performance
Sound transmission	ASTM E90 and ASTM E413 referenced for barrier-backed panels; STC data to be submitted
Mounting	Concealed mechanical clip and locking system for demountable installation, or Panawall frame and clips

Characteristic	Technical data
Adhesive	Non-staining, low-VOC panel adhesive compatible with the core and substrate
Installation tolerance	Maximum 1/16" (1.6 mm) variation between adjacent panels; 1/8" in 8 ft (3 mm in 2.4 m) from level and plumb
Environmental limits	Maintain 60 to 80 °F (16 to 27 °C) and 35 to 55 percent relative humidity during storage, installation, and the product life cycle. Not for exterior, high-humidity, or wet locations. Acclimate 72 hours prior to installation.
Applications	Interior walls and ceilings

Tested configuration. NRC 0.95 applies to a 1.569 in. (39.85 mm) hemp-core specimen in the Type C-90 mounting of report RAL-A24-130, whose sponsor designation was "Inksonics Hemp Panel." InkSonics® uses the same core, mounting, and acoustically transparent facing fabric; the digital print is applied to that same fabric. The catalog 1 in., 1-1/2 in., and 2 in. builds are not individually covered by this report. Data applies to the standard transparent print fabric.

Nominal dimensions: All dimensions shown are nominal. Final product selection and detailing should be confirmed against current production data, project conditions, applicable codes, and installation requirements.

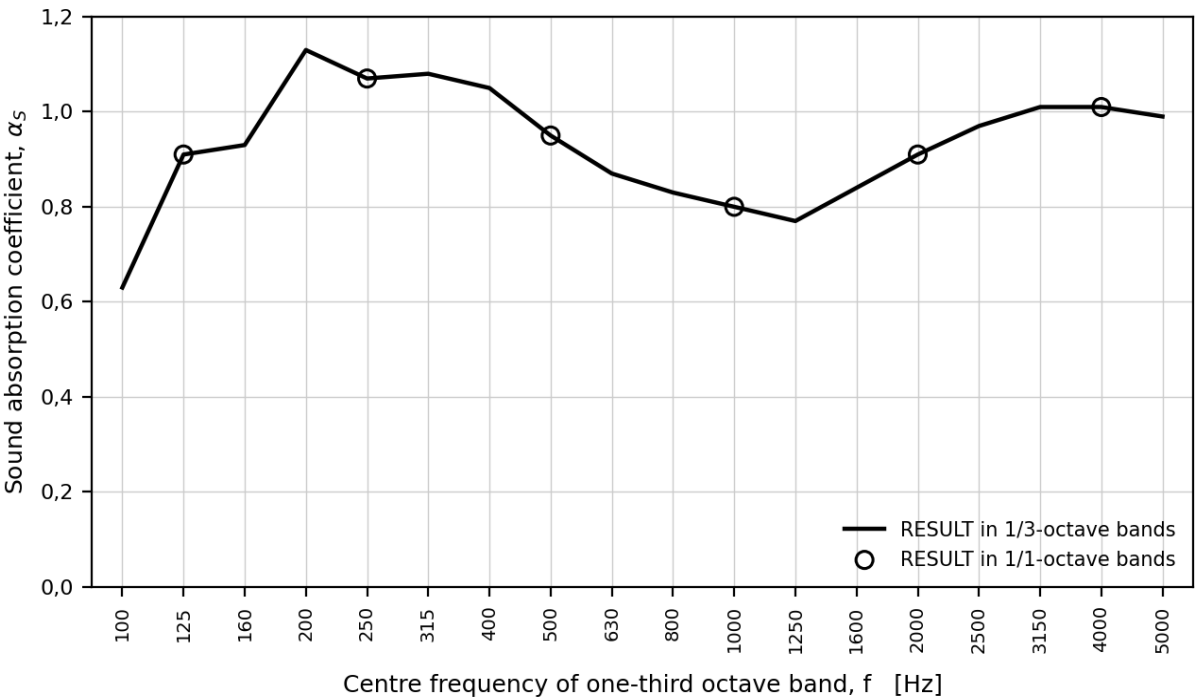
Acoustic Performance

Sound absorption was measured by Riverbank Acoustical Laboratories (Geneva, Illinois; NVLAP Lab Code 100227-0) in accordance with ASTM C423-23, with specimen mounting per ASTM E795-23. Test conducted March 4, 2024; report RAL-A24-130, sponsor designation "InkSonics Hemp Panel." The specimen was a hemp-core acoustical panel of approximately 81 sq. ft. (7.543 m²) calculation area, 1.569 in. (39.85 mm) thick, tested in the Type C-90 mounting described below. The InkSonics® digital print is applied to the same acoustically transparent facing fabric and does not alter this result.

Tested assembly	Mounting	NRC
Hemp-core panel, 1.569 in. (39.85 mm), over 3.5 in. (89 mm) stud cavity fully filled with semi-rigid fiberglass insulation	ASTM E795 Type C-90	0.95

Sound Absorption Coefficients

One-third-octave sound absorption coefficients from report RAL-A24-130. SAA = 0.94; NRC = 0.95. The InkSonics® print is carried on the same acoustically transparent facing fabric represented in this test. Several mid-band coefficients exceed 1.00, which is expected for thick absorbers in reverberation-room testing due to edge diffraction; per convention these are reported as measured. Non-accredited extended-range appendix bands are not shown here.



TEST BASIS

ASTM C423-23 reverberation-room method; ASTM E795-23 Type C-90 mounting. Riverbank Acoustical Laboratories, report RAL-A24-130, conducted March 4, 2024, issued March 5, 2024. Instruments in current calibration at test date.

IMPORTANT LIMITATION

Results apply only to the specific sample submitted and the tested Type C-90 mounting. The print is applied to the same transparent facing fabric; heavy ink coverage on custom artwork should be reviewed for acoustic transparency. Other thicknesses and mounting depths will perform differently. Do not extrapolate.

Riverbank Acoustical Laboratories is NVLAP-accredited (Lab Code 100227-0). Per the report, it must not be used to claim product certification or endorsement by RAL, NVLAP, NIST, or any U.S. government agency, and must not be modified without RAL's written approval. This data sheet summarizes the report for product-selection purposes and does not replace it. SAA is the average of the 200-2500 Hz bands; NRC is the average of the 250, 500, 1000, and 2000 Hz coefficients.