

ACOUSTICALM PANELS TECHNICAL DATA SHEET

Acousticalm Fabric-Wrapped Acoustical Panels

Fabric-wrapped acoustical wall panels with resin-hardened edges over a rigid hemp core.

PRODUCT OVERVIEW

Acousticalm Fabric-Wrapped Acoustical Panels are factory-fabricated absorptive wall panels with resin-hardened edges, supplied with the mounting hardware, trim, and accessories required for installation to gypsum board, studs, or a solid substrate. Available as standard absorptive, tackable, impact-resistant, and barrier-backed panels. Reference specification: Section 09 8433 - Sound-Absorbing Wall Units.

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
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
Adhesive	Non-staining, low-VOC panel adhesive compatible with the core and substrate

Characteristic	Technical data
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 (sponsor designation "Inksonics Hemp Panel") in the Type C-90 mounting of report RAL-A24-130. The catalog 1 in., 1-1/2 in., and 2 in. fabric-wrapped builds are not individually covered by this report; a facing fabric will alter high-frequency absorption. Test other builds before claiming their performance.

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.

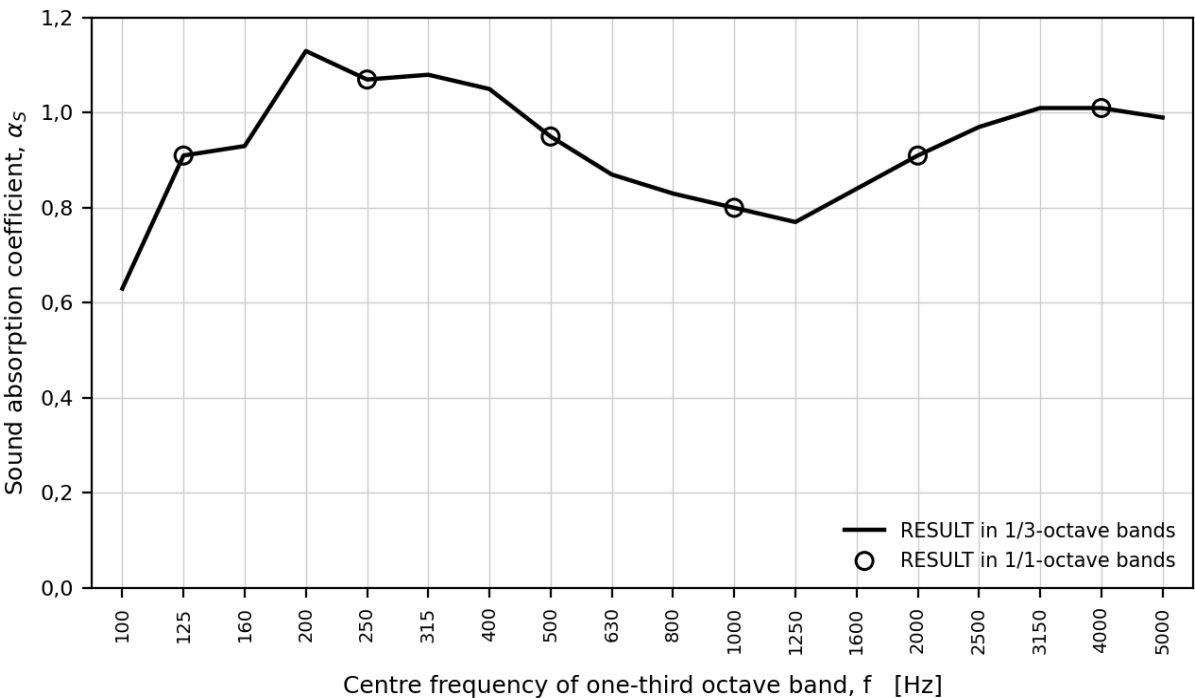
Acoustic Performance

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. 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.

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. 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 specimen was a bare hemp core at 1.569 in.; fabric-wrapped catalog builds and other thicknesses will perform differently. Core density, panel thickness, facing, mounting depth, and perimeter conditions all affect performance. 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.