

**SECTION 09 8433**  
**SOUND-ABSORBING WALL UNITS**  
*(Acousticalm® Fabric-Wrapped Acoustical Panels)*

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes: Factory-fabricated, fabric-wrapped acoustical wall panels with resin-hardened edges, together with the mounting hardware, trim, and accessories required for installation to gypsum board, studs, or a solid substrate for interior sound absorption.
  - 1. Product: Acousticalm® Fabric-Wrapped Acoustical Panels.
  - 2. [Standard absorptive panels.]
  - 3. [Tackable panels.]
  - 4. [Impact-resistant (high-density facing) panels.]
  - 5. [Barrier-backed (sound-blocking) panels with mass-loaded vinyl septum.]
- B. Products Not Furnished or Installed Under This Section:
  - 1. In-wall blocking and backing for panel attachment.
  - 2. Gypsum board, substrate preparation, and priming.

**1.2 RELATED SECTIONS**

- A. Section [ ] - Rough Carpentry (blocking and backing).
- B. Section [ ] - Wood and Metal Stud Framing.
- C. Section [ ] - Gypsum Board Assemblies.
- D. Section [ ] - Painting and Coating.
- E. Section [ ] - Panawall® Architectural Panel System (Section 09 7710).

**1.3 REFERENCES**

- A. ASTM International (ASTM):
  - 1. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
  - 2. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
  - 3. ASTM E795 - Standard Practices for Mounting Test Specimens During Sound Absorption Tests.
  - 4. [ASTM E90 and ASTM E413 - Sound transmission loss and STC rating (for barrier-backed panels).]
- B. Architectural Woodwork Standards, as jointly published by AWI, AWMAC, and WI, Edition 1.

**1.4 SUBMITTALS**

- A. Product Data: Submit manufacturer's data for each product specified, including preparation instructions, storage and handling requirements, installation methods, and mounting hardware.
- B. Shop Drawings: Submit elevations of each wall indicating panel layout, dimensions, edge profiles, reveal and joint locations, mounting details, and the location of all discontinuities, penetrations, and trim members.
- C. Selection Samples: Submit manufacturer's full range of standard fabric colors and patterns for initial selection.
- D. Samples for Verification: Submit one panel sample, minimum 12 inches by 12 inches (305 mm by 305 mm), for each fabric and edge profile selected, indicating the finished face, edge treatment, and color.

- E. Acoustical Performance Data: Submit independent laboratory test reports showing Noise Reduction Coefficient (NRC) determined in accordance with ASTM C423 for the specified panel construction, mounted per ASTM E795, Type A.
- F. Fire-Test Data: Submit independent test reports showing surface burning characteristics of the finished panel in accordance with ASTM E84.
- G. Safety Data Sheets (SDS): Submit manufacturer's Safety Data Sheets for adhesives, sealants, and other pertinent materials prior to their delivery to the site.
- H. Maintenance Instructions: Submit manufacturer's cleaning and maintenance instructions.

#### **1.5 QUALITY ASSURANCE**

- A. Single-Source Responsibility: Obtain acoustical panels and mounting hardware from a single manufacturer.
- B. Surface Burning Characteristics: Provide finished panels with a Class A (Class 1) rating when tested in accordance with ASTM E84, with a flame-spread index of 25 or less and a smoke-developed index of 450 or less.
- C. [Mockup: Provide one full-size panel of each type, fabric, and edge profile for review. Approved mockup may remain as part of the Work.]

#### **1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery: Deliver panels and associated materials factory-packaged and protected against soiling, moisture, and physical damage.
  - 1. Upon delivery, carefully inspect all cartons, packages, and protective wrap for damage or material shortage.
  - 2. Immediately report any damaged or missing materials to the shipper and to AAPG.
  - 3. Do not commence installation if any components are missing or damaged.
- B. Storage: Store products flat, in the manufacturer's unopened packaging, in a clean, dry, conditioned interior space until ready for installation. Do not store panels on edge or under other materials.
- C. Handling: Handle panels with clean, dry hands or gloves to avoid soiling the fabric face. Do not drag or stack panels face-to-face after removal of protection.

#### **1.7 PROJECT CONDITIONS**

- A. Do not install panels until all wet work is complete and dry, the building is enclosed and weathertight, and the HVAC system is operating and balanced to normal operating conditions.
- B. Environmental Conditions: Maintain temperature, humidity, and ventilation within the limits recommended by the manufacturer. To ensure product performance, maintain a temperature range of 60 to 80°F (16 to 27°C) and a relative humidity range of 35 to 55 percent during storage, installation, and the product life cycle.
- C. Do not use in exterior, high-humidity, or wet locations.

#### **1.8 WARRANTY**

- A. Manufacturer's Warranty: Submit manufacturer's standard written warranty covering materials and workmanship against defects for a period of [one (1) year] from the date of installation.

## **PART 2 - PRODUCTS**

#### **2.1 MANUFACTURER**

- A. Acceptable Manufacturer: American Architectural Products Group (AAPG), 248 James Street, Venice, FL 34285. Telephone: +1-844-307-9571. Email: pwest@aapgco.com.
- B. Product: Acousticalm® Fabric-Wrapped Acoustical Panels.
- C. Distributor: Koroseal Interior Products, 1111 Medina Road, Medina, OH 44256. Telephone: 855-753-5474. Email: info@koroseal.com.

## 2.2 SUBSTITUTIONS

- A. [No substitutions permitted.] [Substitutions permitted in accordance with Section 01 25 00 - Substitution Procedures.]

## 2.3 PANELS

- A. Acoustical Core: Rigid Hemp board with a nominal density of 6 to 7 pounds per cubic foot (96 to 112 kg/m<sup>3</sup>) framed with solid wood.
- B. Panel Thickness: [1 inch (25 mm)] [1-1/2 inches (38 mm)] [2 inches (51 mm)], as indicated on the Drawings.
- C. Panel Sizes:
- Face Dimensions: [Nominal 24 inches by 48 inches (610 mm by 1219 mm)] [As indicated on the Drawings].
  - Maximum standard panel size: 48 inches by 120 inches (1219 mm by 3048 mm). [Custom sizes and shapes as indicated on the Drawings.]
- D. Edge Profile: fabric-wrapped edge; [Square (Type A).] [Beveled.] [Radiused (half-round).] [Mitered return.]
- E. Facing Fabric: Acoustically transparent fabric, wrapped fully around the panel face and edges.
- Fire Performance: Fabric shall qualify for Class A (Class 1) use when tested in accordance with ASTM E84, unadhered mounting method.
  - Standard Fabric: [Guilford of Maine FR701.] [Guilford of Maine Anchorage.] [As selected by the Architect from the manufacturer's standard selection.]
  - Color and Pattern: [ ] [As selected by the Architect from the manufacturer's full range.]
  - [Custom or Contract (COM) fabric, as approved by the manufacturer for acoustical transparency and fire performance.]
  - Railroading / Grain Direction: [Vertical.] [Horizontal.] [As indicated on the Drawings.]
- F. [Barrier Backing: Factory-laminated mass-loaded vinyl (MLV) septum for sound blocking, where indicated. Provide continuous, floor-to-ceiling coverage for effective transmission-loss performance.]
- G. Acoustical Performance: Provide panels achieving the following minimum Noise Reduction Coefficient (NRC) values when tested per ASTM C423 with Type A mounting per ASTM E795:

| Nominal Panel Thickness | Mounting (ASTM E795) | NRC    |
|-------------------------|----------------------|--------|
| 1 inch (25 mm)          | Type A               | [0.75] |
| 1-1/2 inch (38 mm)      | Type A               | [0.90] |
| 2 inch (51 mm)          | Type A               | [1.05] |

## 2.4 MOUNTING HARDWARE AND ACCESSORIES

- A. Mounting Method: [Concealed mechanical clip and locking system for demountable installation.] [Panawall® frame and clips]
- B. Provide all clips, anchors, fasteners, adhesives, and trim recommended by the manufacturer for the specified substrate and mounting method.
- C. Adhesive: Non-staining, low-VOC panel adhesive as recommended by the manufacturer; compatible with the core and substrate.

## 2.5 FABRICATION

- A. Factory-fabricate panels to the sizes and profiles indicated, ready to install except for field fabrication required by jobsite and perimeter conditions.
- Wrap fabric taut and wrinkle-free, fully around all edges and returns; maintain consistent grain and pattern alignment between adjacent panels.

2. Harden panel edges to produce crisp, durable, square corners resistant to fraying and impact.
3. Factory-form cut-outs and penetrations where indicated; seal exposed core.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Installer's Examination: Examine the substrates and conditions under which the Work of this Section is to be performed. Submit written notification to the Architect and the system manufacturer if such conditions are unacceptable. Beginning installation constitutes the installer's acceptance of conditions.
  1. Verify that substrates are smooth, solid, flat, dry, and free of dust, oil, and other contaminants.
  2. Verify that gypsum board joints are taped and finished and that walls are primed and painted before installation begins.
  3. Verify that sufficient blocking, backing, and mounting substrate are provided for the selected mounting method.
  4. Verify that mechanical, electrical, and other items affecting the Work of this Section are placed and ready to receive this Work.

### **3.2 PREPARATION**

- A. Conditioning: Allow panels to acclimate to a balanced environment in the installation location for 72 hours prior to installation.
- B. Protect adjacent surfaces and finished work with drop cloths and masking.
- C. Before installing, examine panels and arrange them to achieve the best combination of color, fabric grain, and pattern. Reject panels with soiled, damaged, or misaligned fabric.

### **3.3 INSTALLATION**

- A. Install panels in strict accordance with the manufacturer's installation instructions, level, plumb, and true to line.
  1. Set out panel layout from the shop drawings; center or balance the layout as indicated so that panel lines coordinate with doors, headers, jambs, and other discontinuities.
  2. Anchor units rigidly and securely to blocking or solid substrate using the specified mounting hardware.
  3. Maintain consistent fabric grain direction and uniform reveals or tight joints between adjacent panels, as indicated.
- B. Installation Tolerances: Install panel faces flush and aligned, with a maximum variation of 1/16 inch (1.6 mm) between adjacent panels and 1/8 inch in 8 feet (3 mm in 2.4 m) from level and plumb.
- C. Avoid contamination of the fabric faces with adhesives, solvents, cleaners, or fingerprints during installation.

### **3.4 CLEANING AND PROTECTION**

- A. Remove dust and foreign matter from panel faces by light vacuuming with a soft brush attachment. Clean fabric in accordance with the manufacturer's instructions; do not use solvents or abrasive cleaners.
- B. Protect installed panels from damage and soiling until Substantial Completion. Replace panels that cannot be cleaned or repaired to the Architect's satisfaction.

## **END OF SECTION 09 8433**