

**SECTION 09 83 16**  
**ACOUSTICAL PLASTER CEILINGS**

**PART 1- GENERAL**

**1.1 QUALITY ASSURANCE**

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of systems required for this Project.
- B. Source Limitations: Obtain acoustical finish system from single source from single manufacturer.
- C. Mockups: Before installing acoustical finish, install mockups of at least 9 sq. meters (100 sq. ft.) in surface area to demonstrate aesthetic effects and set quality standards for material and execution.
  - 1. Included permanent fixtures in mockup such as lights, diffusers, and speakers.
  - 2. Simulate finished lighting conditions for review of mockups.
  - 3. Subject to compliance with requirements, approved mockups may be part of the completed Work if undisturbed at time of Substantial Completion.

**1.2 SUBMITTALS**

- A. Product Data: For each type of product indicated, include manufacturer's written installation instructions.
- B. Shop Drawings: Show details of substrate joints, components, and attachments to other work.
- C. Samples: For each type of finish coat indicated.
- D. Qualification Data: For Installer.
- E. Product Certificates: For acoustical finish system.

**1.3 APPLICABLE PUBLICATIONS**

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by the basic designation only. Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.
- B. American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI):
  - ASCE/SEI-7-10                      Minimum Design Loads for Buildings and Other Structures
- C. American Society for Testing and Materials (ASTM):

C423-09a	Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method (Mounting Type A for NRC)
D3273/D3274	Mold Resistance of Interior Coatings
D3960-13	VOC Content of Coatings
D6991-10	Flexibility of Organic Coatings
E84-15b	Surface Burning Characteristics of Building Materials
E605-15	Density of SFRM
E761-15	Compressive Strength of SFRM
E1477-13	Luminous Reflectance Factor

#### **1.4 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials to project site in original, unopened packages, and store them in fully enclosed space where they will be protected against damage from moisture and other harmful conditions. Protect materials from freezing.
- B. Inspect materials upon delivery and immediately report to COR damaged or defective goods.

#### **1.5 FIELD CONDITIONS**

- A. Environmental Limitations: Do not install acoustical finish until spaces are enclosed and weather tight, wet work in spaces is complete and dry, work at and above ceilings is complete. Maintain 15 - 32 degrees C (60 - 90 degrees F) ambient temperature and 70 percent relative humidity maximum. This condition should be maintained during and after the installation. Ventilate building space during acoustical finish application and until dry.

### **PART 2- PRODUCTS**

#### **2.1 PERFORMANCE CRITERIA**

- A. Noise reductions Coefficient: NRC 0.90; ASTM C423 - 07a Test Mounting Type A.
- B. Flame Spread: Class A with flame spread and smoke development <25; ASTM E84.
- C. Light Reflectance: 93; ASTM E1477.
- D. VOC:
  - 1. Adhesive: Less than or equal to 2 grams per liter per EPA Method 24.
  - 2. Acoustical Plaster: Less than or equal to 3 grams per liter per ASTM D3960.
  - 3. Primer: Less than or equal to 23 grams per liter per EPA Method 24.

4. Acoustical Coating: Less than or equal to 3 grams per liter per ASTM D3960.

E. Mold: Meets ASTM D3273/ASTM D3274 mold specification requirements.

F. Internal Stress: 2.1 rating; ASTM D6991.

G. Compressive Strength: 163 psi; ASTM E761.

H. Density: 1.87 lbs/ft; ASTM E605.

## **2.2 MANUFACTURER**

A. Manufacturer: Fellert Acoustical Ceilings AB

B. Distributors: North America: Fellert North America, Inc.; 1706 E. 123rd Terrace, Olathe KS 66061; Tel: 913-393-5920;  
www.fellert.com/organisation.

## **2.3 ACOUSTICAL FINISH SYSTEM**

A. Acoustical Finish System: Provide manufacturer's recommended system:

1. Products: Fellert Silk Finish.

2. Plaster: Spray-applied and hand troweled, sound absorbing plaster, 2-coat system composed of cotton fiber and perlite.

a. Total Plaster Dry Thickness: 3 mm (0.125 inch).

b. Finish: Silk (smooth).

3. C-Channel: Plastic.

4. Acoustical Board: 39 mm (1.50 inch) 6 lb density sound absorbing, fiberglass board.

5. Adhesive: Manufacturer's recommend adhesive.

6. Primer: Manufacturer's recommended primer.

7. Coating: Manufacturer's recommended coating.

a. Total Coating Dry Thickness: approx. 1 mil.

b. Color: White

B. Accessories: As recommended by manufacturer.

C. Water: Clean potable water, free of mineral or organic matter.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of Work.

1. Verify gypsum board substrates are sealed air tight with Level 1 finish, ASTM C 840, and HVAC, electrical, fire sprinkler and other penetrations are sealed with gypsum board joint tape or self-adhesive fire-tape to prevent air movement between occupied space and plenum.

2. Ensure that any previously painted surface is clean, sound and secure to the substrate.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.2 PREPARATION**

A. Comply with manufacturer's written instruction for substrate preparation.

B. Protect adjacent surfaces.

### **3.3 INSTALLATION**

A. General: Apply the acoustical finish system per manufacturer's installation guide and ASTM C1396.

B. Secure C-channel to studwork.

C. Apply adhesive to acoustical board evenly and adhere to drywall substrate. Allow 24 hours to dry prior to any sanding.

D. Apply self-adhesive mesh tape and primer to the intersection of C channel and acoustical board and gypsum drywall rippers. Allow 24 hours to dry prior to plaster application.

E. Sand the acoustical board.

F. Spray and trowel one coat of plaster. Allow to dry 2 to 3 days prior to lightly sanding.

G. Spray and trowel one coat of plaster to match approved mockup. Do not sand final coat. Allow to dry at least 4 hours prior to coating application.

H. Spray-apply coating to match approved mockup.

- - - E N D - - -