



## **SECTION 098316**

### **ACOUSTICAL PLASTER CEILINGS**

#### **PART 1 - GENERAL**

##### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this section.

##### **1.02 SUMMARY**

- A. Section Includes:
  - 1. Field-applied seamless acoustical finish.
  - 2. Acoustical substrate board.
- B. Related Sections:
  - 1. Section 055000 "Metal Fabrications" for structural steel framing system components.
  - 2. Section 092900 "Gypsum Board Assemblies" for gypsum board substrate.

##### **1.03 REFERENCES**

- A. Reference Standards:
  - 1. ASTM C423 Mounting Type A for NRC
  - 2. ASTM E84 for Flame Spread
  - 3. ASTM E1477 for Light Reflectance
  - 4. California Specification 01350 for VOC
  - 5. ASTM D3960 for VOC
  - 6. EPA Method 24 for VOC
  - 7. ASTM D3273/ASTM D3274 for Mold
  - 8. ASTM D6991 for Flexibility
  - 9. ASTM E761 for Compressive Strength
  - 10. ASTM E605 for Density

#### 1.04 SUBMITTALS

- A. Product Data: For each type of product indicated.
  - 1. 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.

#### 1.05 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.

#### 1.06 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 architect damaged or defective goods.

#### 1.07 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**

### **2.01 PERFORMANCE CRITERIA**

- A. Noise reductions Coefficient: NRC 0.95; ASTM C423 - 07a Test Mounting Type A.
- B. Flame Spread: Class A with flame spread and smoke development <25; ASTM E84.
- C. Light Reflectance: 90; ASTM E1477.
- D. VOC:
  - 1. Total System: Meets the classroom and office requirements of the Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers – Version 1.1 – Emission Testing Method for California Section 01350.
  - 2. Adhesive: Less than or equal to 1 grams per liter per EPA Method 24.
  - 3. Acoustical Plaster: Less than or equal to 4 grams per liter per ASTM D3960.
  - 4. Primer: Less than or equal to 9 grams per liter per EPA Method 24.
  - 5. Acoustical Coating: Less than or equal to 2 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: 160 psi; ASTM E761.
- H. Density: 1.86 lbs. /ft.; ASTM E605.

### **2.02 MANUFACTURER**

- A. Manufacturer: Fellert Acoustical Ceilings AB; Kyrkängsgatan 6, 503 38 Borås, Sweden; Tel: 46 33 4302202; [www.fellert.com](http://www.fellert.com).
- B. Distributors:
  - 1. Europe: Fellert Acoustical Ceilings AB; Kyrkängsgatan 6, 503 38 Borås, Sweden; Tel: 46 33 4302202; [www.fellert.com](http://www.fellert.com).
  - 2. North America: Fellert North America, Inc.; 1706 E. 123<sup>rd</sup> Ter, Olathe KS 66061; Tel: 913-393-5920; [www.fellert.com/organisation](http://www.fellert.com/organisation).

3. Asia, Middle East, Africa, Australia and All Other Markets: Fellert Acoustical Ceilings AB; Kyrkängsgatan 6, 503 38 Borås, Sweden; Tel: 46 33 4302202; www.fellert.com.

## 2.03 ACOUSTICAL FINISH SYSTEM

- A. Acoustical Finish System: Provide manufacturer's recommended system:
  1. Products: Fellert Even Better Sahara 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: Sahara (fine textured).
  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] [To match Architect's sample].
- B. Accessories: As recommended by manufacturer.
- C. Water: Clean potable water, free of mineral or organic matter.

## PART 3 - EXECUTION

### 3.01 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.

### 3.02 PREPARATION

- A. Comply with manufacturer's written instruction for substrate preparation.
- B. Protect adjacent surfaces.

### 3.03 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 to fully dry prior to plaster application.
- E. Sand the board.
- F. Spray and trowel one coat of plaster. Allow to fully dry prior to lightly sanding.
- G. Spray and trowel one coat of plaster to match approved mockup and leave to fully dry. Do not sand the final coat of plaster.
- H. Spray-apply coating to match approved mockup.

END OF SECTION