

SECTION 09 84 13 - FIXED SOUND-ABSORPTIVE PANELS

PART 1 - GENERAL

1.1 RELATED WORK

- A. This section of the Specification forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

1.2 REFERENCES

- A. ASTM C423 – Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
- B. ASTM E795 - Standard Practices for Mounting Test Specimens During Sound Absorption Tests
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials

1.3 SYSTEM DESCRIPTION

- A. Fabric wrapped sound absorbing fiberglass panels constructed for direct mounting to walls or ceilings
- B. Fabric wrapped sound absorbing tuned fiberglass panels constructed for direct mounting to walls or ceilings
- C. Theater board sound absorbing fiberglass panels constructed for direct mounting to walls or ceilings
- D. Cementitious wood fiber sound absorbing panels for direct mounting to walls or ceilings

1.4 SYSTEM PERFORMANCE

- A. The materials shall have the following minimum Noise Reduction Coefficient (NRC) performance when tested as a complete finished manufactured system in the A-mounting configuration per ASTM E795:
 - 1. Fabric wrapped sound absorbing fiberglass panels, 1 inch thick: NRC of 0.80
 - 2. Fabric wrapped sound absorbing fiberglass panels, 2 inch thick: NRC of 0.90
 - 3. Theater board sound absorbing fiberglass panels, 2 inch thick: NRC between 0.90
 - 4. Cementitious wood fiber sound absorbing panels: NRC between 0.40
- B. As tested by an independent laboratory in accordance with ASTM E84, the fire hazard classification shall be the following for all materials covered in this section:
 - 1. A flame spread rating between 0 and 25
 - 2. A smoke developed rating between 0 and 450

1.5 SUBMITTALS

- A. Submit detailed shop drawings showing edge profile, elevations for all installations with arrangement of joints and notations as to where dye lot changes occur
- B. Provide a minimum 8 inch by 11 inch sample and fastener system sample including edge profile, panel components, fastener type, finishes and panel layout
- C. Provide installation instructions
- D. Provide independent laboratory test reports performed in accordance with ASTM C423 containing octave band sound absorption coefficients and NRC rating
- E. Provide manufacturer's letters of conformance certifying the sound absorption coefficients, NRC rating and fire hazard classification for items to be installed
- F. Provide copies of the manufacturer's standard warranty against defective workmanship, operation and materials for a period of at least one year from date of final acceptance

1.6 QUALITY ASSURANCE

- A. The supplied products are to be of a manufacturer who regularly engages in the production of such units and who issues complete catalog data on such products

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the project site in the manufacturer's original unopened packaging with identification labels
- B. Store materials at temperature and humidity conditions as recommended by the manufacturer
- C. Protect materials from damage

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Construct panels with sufficient strength to withstand normal handling, transportation, installation, and operational stresses.
- B. Size panels per the drawings with a minimum number of panels and field modification
- C. Fabric wrapped sound absorbing fiberglass wall panels, manufactured units
 - 1. Panels shall be nominally 1 or 2 inch thick as indicated in the drawings
 - 2. Edge detail: as indicated in the drawings
 - 3. Finish material
 - a. As selected by architect
 - b. Fabric must be sufficiently acoustically transparent and adhered to the substrate in a manner to achieve the NRC requirement of Paragraph 1.4
 - 4. Sound absorbing core

- a. Core shall be inert, mildew resistant, vermin-proof glass fiber with a minimum density of 6 pounds per cubic foot to suit the sound absorption performance required
 - b. Core and face sheet shall be encapsulated in polyethylene bagging when installed in environments where the relative humidity will be above 50%
5. Mounting hardware
- a. As selected by architect
6. Acceptable products
- a. Model A108 series by Wall Technology
 - b. Model H.I.R. #1 by Decoustics
 - c. Model Acousti-Tack ATF
 - d. Other approved equal
- D. Fabric wrapped sound absorbing tuned fiberglass panels, manufactured units
1. Panels shall be nominally 1 or 2 inch thick as indicated in the drawings
 2. Edge and face detail: as selected by architect
 3. Finish material
 - a. As selected by architect
 - b. Fabric must be sufficiently acoustically transparent and adhered to the substrate in a manner to achieve the NRC requirement of Paragraph 1.4
 4. Sound absorbing core
 - c. Core shall be inert, mildew resistant, vermin-proof glass fiber with a minimum density of 6 pounds per cubic foot to suit the sound absorption performance required
 - d. Core and face sheet shall be encapsulated in polyethylene bagging when installed in environments where the relative humidity will be above 50%
 5. Face sheet
 - a. $\frac{1}{4}$ " thick perforated hardboard facing having holes of $\frac{1}{4}$ " diameter at 1" on center
 6. Mounting hardware
 - b. As selected by architect
 7. Acceptable products
 - a. Hardside Tuned Panel by Kinetics Noise Control
 - b. Other approved equal
- E. Theater board sound absorbing fiberglass panels

1. Panels shall be nominally 1 or 2 inch thick as indicated in the drawings
 2. Color: black
 3. Sound absorbing panel
 - a. Core shall be inert, mildew resistant, vermin-proof glass fiber with a minimum density of 3 lb/ft³ to suit the sound absorption performance required
 4. Mounting hardware
 - a. As selected by architect
 5. Acceptable products
 - a. SelectSound Black Acoustic Board by Owens Corning
 - b. Or approved equal
- F. Cementitious wood fiber sound absorbing panels, manufactured units
8. Panels shall be nominally 1 thick as indicated in the drawings
 9. Edge detail: as selected by architect
 10. Color: white primer
 11. Sound absorbing panel
 - a. Wood fibers bonded with inorganic hydraulic cement
 12. Mounting hardware
 - a. As selected by architect
 13. Acceptable products
 - a. Standard Interior Wall Panels by Tectum Inc.
 - b. Panel Art by Tectum Inc.
 - c. Other approved equal

PART 3 - EXECUTION

3.1 PREPARATION

- A. Examine construction conditions to receive specified work and proceed only when conditions are satisfactory for installation
- B. Space must be enclosed and protected from the weather
- C. All wet work must be completed and nominally dry before installation

- D. Building must be closed to the weather and a temperature range of 60 to 85 degrees Fahrenheit and not more than 50% humidity achieved

3.2 INSTALLATION

- A. Install all components in strict accordance with manufacturer's instructions and approved shop drawings
- B. Do not install materials with damage, imperfections, poor color match or other deficiencies. Replace with acceptable material as directed by owner.
- C. Protect surfaces from soiling and damage. Clean lightly soiled exposed surfaces in compliance with manufacturer's instructions. Repair minor finish damage as recommended by manufacturer. Remove and replace work which cannot be successfully cleaned or repaired to permanently eliminate evidence of damage.
- D. Coordinate with obstructions such as fixtures, HVAC equipment, and fire suppression system
- E. Locate and space panels per the drawings

END OF SECTION 09 84 13

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