



SECTION 23 32 48.11
ACOUSTIC AIR PLENUMS ACCESSORY

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 SECTION INCLUDES

- A. Sound attenuating, acoustical canopy units (caps)

1.03 RELATED SECTIONS

- A. Section 09 81 16 - Acoustic Blanket Insulation

1.04 REFERENCES

- A. ASTM C411 Standard Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation
- B. ASTM C1071 Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material)
- C. ASTM E84/UL 723/NFPA 255 Standard Test Method for Surface Burning Characteristics of Building Materials
- D. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
- E. ASTM C1338 Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings
- F. ASTM C739 Standard Specification for Cellulosic Fiber Loose-Fill Thermal Insulation
- G. ASTM G22 Standard Practice for Determining Resistance of Plastics to Bacteria
- H. ASTM C1104 Standard Test Method for Determining the Water Vapor Sorption of Unfaced Mineral Fiber Insulation
- I. ASTM E1414/E1414M Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum
- J. ASTM E413 Classification for Rating Sound Insulation
- K. ANSI/ASHRAE 70 Method of Testing the Performance of Air Outlets and Air

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's product data
- B. Shop Drawings: For acoustical canopy units. Include dimensions, elevations, sections, details, and attachments to ceiling grid or return air grilles.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency.
- D. Manufacturers' Instructions: Installation instructions for acoustical canopy units.

1.06 QUALITY ASSURANCE

- A. Product Qualification: Acoustic Blanket Insulation (cotton shoddy) shall meet the following criteria:

PROPERTIES	PERFORMANCE	TEST METHOD
Operating Limits Temperature Velocity	Maximum 250° (121°C) 5000 ft/min	ASTM C411 ASTM C1071
Surface Burning Characteristics (Fire Hazard Classification)	Flame Spread Max: 25 Smoke Developed Max: 50 Class A / Class 1	ASTM E84 UL 723 NFPA 255
Corrosion Resistance	Pass - Non Corrosive	ASTM C739
Fungi Resistance	Pass - No Growth	ASTM G21 ASTM C1338 ASTM C739
Bacteria Resistance	Pass - No Growth	ASTM G22
Water Vapor Absorption	Less Than 1% By Weight	ASTM C1104

- B. Ceiling Attenuation Class: Where CAC ratings are indicated, provide units with CAC rating that was determined by testing in accordance with ASTM E1414 / E1414M and ASTM E413 by a qualified independent testing agency.
- C. Fire-Test Response Characteristics: Provide caps complying with the following requirements:
1. Surface-Burning Characteristics: Provide caps per ASTM E84:
 - a. Flame-Spread Index: 25 or less
 - b. Smoke-Developed Index: 50 or less
- D. Air Performance: Where static pressure ratings are indicated, provide units with static pressure ratings as determined by testing in accordance with ANSI/ASHRAE 70 by a qualified independent testing agency.

1.07 DELIVERY, STORAGE, & HANDLING

- A. Delivery: Deliver material in the manufacturer's original, unopened, undamaged containers with identification labels intact until ready for installation.
- B. Storage: Store materials protected from exposure to harmful environmental conditions.

1.08 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install caps until building is enclosed and finishing operations, including ceilings, lighting fixtures, HVAC are complete.
- B. Coordination of Work: Coordinate layout and installation of caps with other units of Work. Installation of ceilings, lighting fixtures, HVAC equipment, and fire-suppression systems should be completed before caps are installed.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: AcoustiCAP which is located at: 1220 Wilson Drive, West Chester PA 19380; 484-887-7222; Email: info@acousticap.net; Website: www.acousticap.net
- B. Substitutions: Not permitted
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

2.02 ACOUSTICAP

- A. Basis-of-Design: AcoustiCAP
- B. Description: Cap is made of 22-gauge galvanized steel dome with a radius of 12-1/2", with recycled cotton shoddy (acoustic blanket insulation) bonded to the interior surface (that which faces the floor) for the purpose of attenuating sound. Two separate strips of recycled cotton shoddy are placed on the return air grille, parallel to each other and the dome.
 - 1. Overall thickness: 1-3/4"
 - 2. Height: Cap shall be 8-1/2" from the return air grille to the top quadrant of the dome.
 - 3. Widths: 24" x 24"
 - 4. Finish:
 - a. Galvanized Steel Dome: Plain (unfinished)
 - b. Recycled Cotton Shoddy: blanket is blue in nature with black scrim on one side

2.03 FABRICATION

- A. AcoustiCAP is factory assembled and shipped ready to install.

2.04 FINISHES, GENERAL

- A. Provide an acoustical canopy unit free of sharp edges with recycled cotton shoddy bonded to the interior surface of the dome (the side that faces the floor). Provide two additional recycled cotton shoddy strips that are placed on the return air grille. The strips have a black scrim the bottom to camouflage them from being seen when looking up and into the return air grille.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

END OF SECTION 23 32 48.11