

Section 07211
Custom Fit Seamless Insulation
Blow-In-Blanket System

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Custom fit seamless (blown) insulation, materials, accessories and installation.
- B. Related Sections include, but are not necessarily limited to:
 - a. Carpentry: Division 6 Carpentry Sections

1.02 REFERENCES (NOTE SEE PART 2 FOR RELOCATION OF THIS ARTICLE)

- A. Referenced Standards:

Specifier Note:

- 1. American Society of Testing and Materials (ASTM)
 - a. ASTM C-518, Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - b. ASTM C-687, Determination of Thermal Resistance of Loose-Fill Building Insulation.
 - c. ASTM C-794, Mineral Fiber Loose-Fill Thermal Insulation
 - d. ASTM C-1104, Determining the Water Vapor Sorption of Unfaced Mineral Fiber Insulation.
 - e. ASTM E-84, Surface Burning Characteristics of Building Materials.
 - f. ASTM E-136, Behavior of Materials in a Vertical Tube Furnace at 750° C.
 - g. ASTM E-736, Cohesion/Adhesion of Sprayed Fire-Resistive Materials applied to Structural Members.
 - h. ASTM C-423, Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - i. ASTM E-970, Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source.
 - j. ASTM E-90, Airborne Sound Transmission Loss of Building Partitions and Elements.

1.03 DEFINITIONS

- A. Definitions: The following definitions shall apply to Work of this section:
 - 1. Installer or Applicator: Installer or applicator is person actually

- installing or applying product in field at Project site.
- 2. BIBS: Blow-In-Blanket System
- 3. BIBCA: Blow-In-Blanket Contractors Association
- 4. BIBCA Training Center Certification: (Definition Needed – See Training)
- 5. Advanced Drywall Approach (Definition Needed – See Part 3 Installation)

1.04 SYSTEM DESCRIPTION

- A. Insulation system consists of insulation, insulation binder, net fabric, and, as specified, Net Support System.

1.05 SUBMITTALS

- A. Product Data: Product technical data and installation instructions, including:
 - 1. Acknowledgment that products installed are provided by company's/manufacture's named, and product have been installed in accordance with manufacturer's installation instructions.
 - 2. Acknowledgment that products installed meet requirements of standards referenced.
 - 3. Equipment Certification: Certificate indicating equipment is acceptable for system specified.

1.06 QUALITY ASSURANCE

- A. Qualifications: Installers shall be BIBCA Certified.
- B. Training:
 - 1. Installers shall be certified by BIBCA Training Center.
 - 2. Certification shall be renewed bi-annually (every two years)
- C. Installation Equipment: Installer shall inspect application equipment and certify in writing that equipment is acceptable for system specified.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. General: Ship and store products in accordance with manufacturer's/suppliers recommendations.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturers: Subject to compliance with Contract Documents, the following manufacturers are acceptable:
 - 1. Insulation Manufacturer and Product

- a. CertainTeed Corporation, Insul-Safe, and OPTIMA insulation
- b. Johns Manville, Climate Pro Insulation
2. Insulation Adhesive Binder Manufacturer and Product
Insul-Binder, Inc., Insul-Binder Adhesive Binder
3. Net Manufacturer and Product:
a. Insul-Binder, Inc., Insul Net Insulation Retention Fabric
4. Insulation Retention Fabric manufacturer and Product:
a. Insul-Binder Isomesh Insulation Retention Fabric
b. CertainTeed Corporation, OPTIMA Fabric Insulation Retention Fabric.
5. Fabric Retention System (Steel Framed Structures) Manufacturer and Product:
a. J. R. Dixon & Company, Inc., Net Support System products, fabric Retention System.

2.02 MATERIALS

- A. Insulation Material:
 1. Material: Fiberglass. In conformance with ASTM C-764
 2. Non-Combustible: In accordance with ASTM E-136
 3. Thermal Resistance (ASTM C-518) R-Value per inch-pcf:
 - a. Determine based on specific product used and density blown, per ASTM C-687
 4. Water absorption (ASTM C-1104) 5% (max. By weight).
 5. Volume Change (Settlement): Zero
 6. Noise Reduction Coefficient: 0.85, (ASTM C-423)
 7. Sound Absorption Coefficient (at 125-400 hertz): 0.29, (ASTM C-423)
 8. Surface Burning Characteristics (ASTM E-84)
 9. Sound Transmission Class (ASTM E-90): 46
- B. Insulation Binder Material:
 1. Type: Water based adhesive type.
 2. Bond Strength: In accordance with ASTM E-736
 3. Surface Burning Characteristics, ASTM E-84 (Add title)
 - a. Flame Spread: 15, 25 or less
 - b. Smoke Developed: 15, 50 or less
- C. Net Material:
 1. Material: Polypropylene
 2. Openings: ¼" square
- D. Fabric Material:
 1. Insul-Binder, Inc., Isomesh: 100% polyethylene thermally bonded t RFX spun bound non-woven fabric.
 2. CertainTeed Co, OPTIMA: Spun Bond Polypropylene.
- E. Net Support System (Fabric Retention System):
 1. Tabs (Manufactured with steel framing members):
 - a. Protruding upward on top track

- b. Protruding downward on bottom track
- c. Protruding downward on studs
- 2. Tabs (Strips)
 - a. Strip width: 1”
 - b. Strip length: 48”
 - c. Steel Thickness: 22 guage
- 3. Adhesive:
 - a. Width: 1”
 - b. Thickness: 5 mil
 - c. Oil Resistant

2.03 FIBERGLASS INSULATION MATERIAL TESTING AND STANDARDS

A. General:

- 1. American Society of Testing and Materials (ASTM): see part 1.02, .

Specifier Note:

- 2. Standard Methods: Test for Critical Radiant Flux of Exposed Attic Floor Insulation using a Radiant Heat Energy Source.

Specifier Note:

- 3. Underwriters Laboratories Inc. (UL):
 - a. Building Materials Directory, current edition as of date of construction contract.
 - b. UL 723-79 (ADD TITLE – SEE PART 2 – 2.02, B., 3.)

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examination: Prior to work of this section, carefully inspect installed work of other trades and verify that such work is complete to point where installation of specified New Support System and specified insulation products may be properly installed in accordance with manufacturer’s recommendations.

3.02 PREPARATION

- A. Cleaning: Clean surfaces in accordance with manufacturers (suppliers) recommendations.

3.03 INSTALLATION

- A. Insulation Installation :
 - 1. Install products in accordance with manufacturer’s instructions.
 - 2. Place loose insulation by machine-blowing into spaces and onto surfaces as indicated. Level horizontal applications to uniform

thickness indicated, firmly settled to uniform density, but not excessively compressed.

3. Insulate full thickness over surfaces to be insulated. Fit tightly around obstructions, fill voids. Cover penetrations with insulation. Completely fill cavity.
 4. Where required, install separate vapor barrier to warm side of building (exterior walls) as indicated on Drawings. Completely seal each wall area to surrounding construction. Recommended method shall be Advanced Drywall Approach. Install so that completed installation is vapor tight.
 5. Insulation shall be installed to a density of 1.5 to 2.5 pounds per cubic foot (min.). Actual required density is based on specific materials and R-value selected. Material should bulge ½" to 1" past studs to insure proper density. Roll back material flush to studs. Applications are subject to density check.
- B. Steel Framed Construction: Install Net Support System on tracks and studs. Install net or fabric. Blow insulation into voids.
- C. Wood framed Construction: Install net or fabric with staples. Blow insulation into voids.

3.04 FIELD QUALITY CONTROL

- A. Installation Compliance: Provide Owner with a written statement that insulation has been installed in accordance with specifications.

3.05 CLEANING

- A. General: Clean areas after installation of insulation. Do not leave any insulation or associated items on Project site.

END OF SECTION