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

A. Referenced Standards:

1. American Society of Testing and Materials (ASTM)
   a. ASTM C-518, Steady-State 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-764, 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-90, Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
   h. ASTM E-136, Behavior of Materials in a Vertical Tube Furnace at 750° C.
   i. ASTM E-736, Cohesion/Adhesion of Sprayed Fire-Resistive Materials applied to Structural Members.
   j. ASTM E-970, Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source.

1.03 DEFINITIONS

A. Definitions: The following definitions shall apply to rest of this section:
   1. Installer or Applicator: Installer or applicator is the person actually installing or applying the product in the field at the project site.
   2. BIBS(®): Blow-In-Blanket® System
   3. BIBCA: Blow-In-Blanket Contractors Association
   4. BIBCA Training Center Certification: Completed training by an approved BIBCA instructor.
   5. Ark-Seal: Holder of patents for the Blow-In-Blanket® System.
   6. Company: Refers to company performing the installation.

7. Manufacturers: See 2.01 A

1.04 SYSTEM DESCRIPTION

A. Insulation system consists of insulation materials, netting or fabric retention material, and adhesive binder is optional. The system must be installed by a trained, certified installation contractor.

1.05 SUBMITTALS

A. Product Data: Product technical data and installation instructions, including:
   1. Acknowledgment that products installed are produced by approved manufacturers and product has been installed in accordance with manufacturer's installation instructions.
   2. Acknowledgment that products installed meet requirements of standards referenced.

1.06 QUALITY ASSURANCE

A. Qualifications: Company shall be an approved Ark-Seal Blow-in-Blanket® System dealer.
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 use equipment that is approved by Ark-Seal.

1.07 DELIVERY, STORAGE, AND HANDLING

A. General: Ship and store products in accordance with manufacturer's (supplier's) recommendations.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS/DISTRIBUTORS

A. Insulation Manufacturer and Product
   1. CertainTeed Corporation, InsulSafe 4®, and OPTIMA® insulation
   2. Johns Manville, Climate Pro® insulation
B. Distributors and Products
   1. Blow in Blanket, Inc. – optional adhesive binder
   2. Blow in Blanket, Inc. - insulation retention fabric
      a. Isomesh
      b. OPTIMA Fabric
      c. Insul Net
      d. Johns Manville Fabric

2.02 MATERIALS

A. Insulation Material:
   1. Material: Fiber glass. In conformance with ASTM C-764 Type I, Category 1.
   2. Non-Combustible: In accordance with ASTM E-136
   3. Thermal Resistance (ASTM C-518):
      a. Determine based on specific product used, thickness, and density blown, per ASTM C-687
   4. Water Absorption (ASTM C-1104): 5% (max. by weight)
   5. Volume Change (Settlement): Zero
   6. Surface Burning Characteristics (ASTM E-84): Flame Spread 25 or less – Smoke Developed 50 or less
   7. Sound Transmission Class (ASTM E-90): 46 (dependant on assembly)
   8. Critical Radiant Flux – Flame Propagation Resistance >=0.12 W/cm²

B. Insulation Adhesive Binder:
   1. Type: Water based adhesive type.
   2. Bond Strength: In accordance with ASTM E-736

C. Net Material:
   1. Blow in Blanket, Inc.: Insul Net

D. Fabric Material:
   1. Blow-in-Blanket, Inc.: Isomesh, OPTIMA Fabric, Johns Manville Fabric

2.03 FIBER GLASS INSULATION MATERIAL TESTING AND STANDARDS

A. General:

   1. American Society of Testing and Materials (ASTM): see part 1.02, .
   2. Underwriters Laboratories Inc. (UL):
      a. Building Materials Directory, current edition as of date of construction contract.

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 retention fabric and specified insulation products may be properly installed in accordance with manufacturer's recommendations. Appropriate building inspections must be completed prior to installation.

3.02 PREPARATION

A. Steel studs must be free of all oil & grease prior to installing netting or fabric.

3.03 INSTALLATION

A. Steel Framed Construction: Install retention fabric with adhesive on tracks and studs. Blow insulation into voids.
B. Wood Framed Construction: Install net or fabric with staples or adhesive approximately 1" apart. Blow insulation into voids.
C. Insulation Installation :
   1. Install products in accordance with manufacturer's instructions.
   2. Install loose insulation by machine-blowing into spaces and closed cavities as indicated.
   3. Completely fill all cavities. Fit tightly around obstructions and fill all voids.
   4. Where required, install separate vapor retarder to warm side of building (exterior walls) as indicated on drawings. Completely seal each wall area to surrounding construction. Install so that completed installation is vapor tight.
   5. Insulation shall be installed to a density of 1.8 to 2.5 pounds per cubic foot (min.) as per manufacturers recommendation. 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. See manufacturer's coverage chart on bags of insulation.

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