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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, contained in the *CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

SECTION 07210

REFLECTIVE INSULATION

Specifier Notes: This section covers Fi-Foil Alfol Type 1A multi-layer reflective insulation intended for use on furred-out masonry walls. Two versions (1) Vapor Retarder (2) Hi-Perm Non-Vapor Retarder.

Consult Fi-Foil for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Multi-layer reflective insulation and vapor barrier.

1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 06110 - Wood Framing.
- B. Section 07260 - Vapor Retarders.
- C. Section 07270 - Air Barriers.
- D. Section 09110 - Metal Furring Systems.

1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. ASTM C 236 - Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box.
- B. ASTM C 727 - Use and Installation of Reflective Insulation in Building Constructions.
- C. ASTM C 1224 - Reflective Insulation for Building Applications.
- D. ASTM C 1371 - Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
- E. ASTM D 3310 - Determining Corrosivity of Adhesive Materials.
- F. ASTM E 84 - Surface Burning Characteristics of Building Materials.
- G. ASTM E 96 - Water Vapor Transmission of Materials.
- H. Federal Specification HH-I-1252B – Reflective, Thermal Cellulosic Fiber Insulation Board.
- I. MIL-STD-810D – Fungi Resistance.

1.4 SUBMITTALS

- A. Comply with Section 01330 - Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including installation instructions. Indicate compliance with material requirements.
- C. Samples: Submit manufacturer's sample, minimum 6 inches square.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying material name and manufacturer.
- B. Storage: Store materials in a clean, dry area indoors in accordance with manufacturer's instructions.
- C. Handling: Protect materials during handling and installation to prevent damage.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Fi-Foil Company, PO Box 800, Auburndale, Florida 33823. Toll Free (800) 448-3401. Phone (863) 965-1846. Fax (863) 967-0137. Web Site www.fifoil.com. E-Mail custserv@fifoil.com.

2.2 REFLECTIVE INSULATION

- A. Multi-Layer Reflective Insulation and Vapor Barrier: Fi-Foil Alfol Type 1A.
- B. Description:
 - 1. Inside Layer: Minimum 0.00035 inch aluminum foil.
 - 2. Outside Layer: 35 pound natural kraft paper coated with polyethylene, laminated to 26 pound medium linerboard which functions as an expander that separates paper from foil creating a reflective air space.
 - 3. When installed on furring strips spaced 16 inches or 24 inches on center, a second reflective air space is formed. This air space is dependent on thickness of furring strip.
- C. Compliance:
 - 1. ASTM C 1224-97.
 - 2. ICC Legacy Report #2133A.
 - 3. Metro-Dade Report 01-1127.12.
 - 4. Earned Energy Star.
- D. Testing:
 - 1. R-Value, Heat Flow Horizontal, ASTM C 236:
 - a. 3/4 Inch Cavity: 4.3 (4.2 Hi-Perm-Not a Vapor Retarder).
 - b. 1-1/2 Inch Cavity: 5.0 (4.9 Hi-Perm-Not a Vapor Retarder).
 - 2. Water Vapor Permeance, ASTM E 96: 0.678 (5.48 Hi-Perm Version).
 - 3. Flammability, ASTM E 84:
 - a. Flame Spread Rating: 65.
 - b. Smoke Developed Rating: 5.
 - 4. Interior Wall and Ceiling Finish Classification: Class B.
 - 5. Foil Emittance, ASTM C 1371: 0.034.
 - 6. Corrosivity, ASTM D 3310: None.
 - 7. Adhesive Performance:
 - a. Bleeding: None.
 - b. Delamination: None.
 - c. Pliability: No signs of cracking or delamination.
 - 8. Mold and Mildew, MIL-STD-810D: Pass.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive multi-layer reflective insulation and vapor barrier. Notify Architect if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

3.2 INSTALLATION

- A. Install multi-layer reflective insulation and vapor barrier in accordance with manufacturer's instructions and ASTM C 727 at locations indicated on the drawings.
- B. Splice multi-layer reflective insulation and vapor barrier in wall cavities in accordance with manufacturer's instructions to avoid gaps. Tape seams if splice has been butted.
- C. Cut material to fit snugly around electrical wall outlets and other cutouts. Tape edges of

material to outlets and cutouts if outside wall can be seen.

3.2 INSTALLATION (continued)

- D. Tape tears in material.
- E. Replace damaged material as directed by Architect.

3.3 PROTECTION

- A. Protect multi-layer reflective insulation and vapor barrier from damage during construction.

END OF SECTION