



Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The CSI Construction Specifications Practice Guide*.

This 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” after editing this section.

Section numbers and titles are based on *MasterFormat 2014 Update*.

SECTION 07 27 00

AIR BARRIERS

Specifier Notes: This section covers Fi-Foil “SkyFlex” air barriers for use in reducing radiant heat transfer when exposed to air films or enclosed air spaces in building cavities. Consult Fi-Foil Company, Inc. for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Air barriers.

1.2 RELATED REQUIREMENTS

Specifier Notes: Edit the following list of related sections as necessary. Limit the list to sections with specific information that the reader might expect to find in this section, but is specified elsewhere.

- A. Section 07 21 00 – Thermal Insulation: Thermal insulation with integral vapor retarders.

- B. Section 07 26 00 – Vapor Retarders.

1.3 REFERENCE STANDARDS

Specifier Notes: List reference standards used elsewhere in this section, complete with designations and titles.

- A. ASTM C 1136 – Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation.
- B. ASTM C 1338 – Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings.
- C. ASTM C 1371 – Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
- D. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- E. ASTM E 96 – Standard Test Methods for Water Vapor Transmission of Materials.
- F. ASTM E 2178 – Standard Test Method for Air Permeance of Building Materials.

1.4 SUBMITTALS

Specifier Notes: Edit submittal requirements as necessary. Delete submittals not required.

- A. Comply with Section 01 33 00 – Submittal Procedures.
- B. Product Data: Submit manufacturer’s product data, including installation instructions.
- C. Samples: Submit manufacturer’s sample of air barriers, minimum 6 inches square.
- D. Manufacturer’s Certification: Submit manufacturer’s certification that materials comply with specified requirements and are suitable for intended application.
- E. Warranty Documentation: Submit manufacturer’s standard warranty.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery Requirements: Deliver materials to site in manufacturer’s original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage and Handling Requirements:
 - 1. Store and handle materials in accordance with manufacturer’s instructions.
 - 2. Keep materials in manufacturer’s original, unopened containers and packaging until installation.
 - 3. Store materials in clean, dry area indoors.
 - 4. Protect materials during storage, handling, and installation to prevent damage.

PART 2 PRODUCTS



Specifier Notes: Specify if substitutions will be permitted.

- B. Substitutions: [Not permitted] [In accordance with Division 1].

2.2 AIR BARRIERS

- A. Air Barriers: Fi-Foil "SkyFlex".

- B. Description:

1. Multi-laminate air barrier.
2. Two outer layers of aluminum foil laminated to layer of woven polyethylene.
3. Thickness of Each Layer: Minimum 0.00025 inch.
4. Vapor retarder.

- C. Testing:

1. R-Value, Nominal, Wall System, based on mean temperature of 50 degrees F, 30 degrees differential:

Specifier Notes: R-values can be calculated using the Thermal Resistance Tables from the ASHRAE Handbook.

- a. One Side Exposed to Attic: 1.7.
- b. 0.75-Inch Enclosed Air Space: 2.9.
- c. 1.50-Inch Enclosed Air Space: 2.6.
2. Air Permeability, ASTM E 2178: Less than 0.02 L (s-m²) at 75 Pa.
3. Water Vapor Permeance, ASTM E 96: 0.01 perm.
 - a. Vapor Retarder: Class I.
4. Surface Burning Characteristics, ASTM E 84:
 - a. Flame Spread Index: Less than 25.
 - b. Smoke Developed Index: Less than 450.
5. Mold and Mildew Resistance, ASTM C 1338: No growth.
6. Foil Emittance, ASTM C 1371: 0.03.

2.3 ACCESSORIES

- A. Aluminum Foil Tape: Fi-Foil aluminum foil tape.

1. Description: 2-mil aluminum foil coated with cold weather acrylic adhesive.
2. UL Classified facing.
3. Width: 3 inches.
4. Thickness: 3.5 mils, exclusive of liner.

5. Adhesion: 96 oz/inch width.
6. Elongation: 4.4 percent.
7. Tensile Strength: 27 lbs/inch width.

B. Facing Tape: Fi-Foil "FSK" facing tape.

1. Description: Reinforced with fiberglass scrim and coated with cold weather acrylic adhesive.
2. Compliance: ASTM C 1136.
3. UL Classified facing.
4. Width: 3 inches.
5. Thickness: 6.5 mils, exclusive of liner.
6. Adhesion: 92 oz/inch width.
7. Elongation: 2 percent.
8. Tensile Strength: 40 lbs/inch width.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive air barriers.
- B. Notify Architect of conditions that would adversely affect installation.
- C. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

- A. Install air barriers in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Splice air barriers in accordance with manufacturer's instructions to avoid gaps.
 1. Tape seams if gaps appear where splice has been butted.
- C. Cut air barriers to fit snugly around openings.
 1. Tape edges of air barriers to openings, if wall can be seen.
- D. Tape tears in air barriers.
- E. Replace damaged air barriers as directed by Architect.

3.3 PROTECTION

- A. Protect installed air barriers from damage during construction.

END OF SECTION