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Guide Specification

Specifier Notes: This guide specification is written in Construction Specifications Institute (CSI) 3-Part Format in accordance with *The CSI Construction Specifications Practice Guide, MasterFormat, SectionFormat, and PageFormat.*

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 Division 01, other specification sections, and the Drawings. Delete all Specifier Notes after editing this Section.

Section numbers and titles are based on *MasterFormat 2016 Edition.*

SECTION 07 21 56

RADIANT BARRIER

Specifier Notes: This Section covers Coverttech Fabricating, Inc. "rFOIL Ultra NT" radiant barrier for use in Sensitive Compartmented Information Facilities (SCIFs). Consult Coverttech Fabricating, Inc. for assistance in editing this Section as required for the Project.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Radiant barrier for Sensitive Compartmented Information Facilities (SCIFs).

1.2 REFERENCE STANDARDS

Specifier Notes: List reference standards used elsewhere in this Section, complete with designations and titles. Delete reference standards from the following list not used in the edited Section.

- A. ASTM International (ASTM) (www.astm.org):

1. ASTM C 1313 / C 1313M – Standard Specification for Sheet Radiant Barriers for Building Construction Applications.
 2. ASTM C 1338 – Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings.
 3. ASTM C 1371 – Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
 4. ASTM D 2261 – Standard Test Method for Tearing Strength of Fabrics by the Tongue (Single Rip) Procedure (Constant-Rate-of-Extension Tensile Testing Machine).
 5. ASTM D 3310 – Standard Test Method for Determining Corrosivity of Adhesive Materials.
 6. ASTM D 4935 – Standard Test Method for Measuring the Electromagnetic Shielding Effectiveness of Planar Materials.
 7. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
 8. ASTM E 96 / E 96M – Standard Test Methods for Water Vapor Transmission of Materials.
- B. Institute of Electrical and Electronics Engineers (IEEE) (www.ieee.org):
1. IEEE 299 – IEEE Standard Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosures.

1.3 SUBMITTALS

Specifier Notes: Edit the Submittals article as required for the Project. Delete submittals not required.

- A. Comply with Division 01.
- B. Product Data: Submit manufacturer's product data, including installation instructions.
- C. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- D. Warranty Documentation: Submit manufacturer's standard warranty.

1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged in the manufacturing of radiant barrier of similar type to that specified for a minimum of 10 years.

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. Do not store materials directly on floor.
 5. Protect materials during storage, handling, and installation to prevent damage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Coverttech Fabricating, Inc., 279 Humberline Drive, Etobicoke, Ontario M9W 5T6, Canada. Toll Free 800-837-8961. Phone 416-798-1340. Fax 416-798-1342. Website www.rfoil.com. Email info@rfoil.com.

Specifier Notes: Specify if substitutions will be permitted.
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- B. Substitutions: [Not permitted] [Comply with Division 01].
- C. Single Source: Provide radiant barrier and aluminum foil adhesive tape from single manufacturer.

2.2 RADIANT BARRIER

- A. Radiant Barrier: "rFOIL Ultra NT" radiant barrier.
1. Description:
 - a. Heavy-duty radiant barrier sheet.
 - b. Single layer of woven polyethylene material, bonded to and sandwiched between 2 reflective, solid aluminum surfaces.
 - c. Vapor barrier.
 2. Use:
 - a. Sensitive Compartmented Information Facilities (SCIFs).
 - b. Interior.
 3. Edge Type: Square.
 4. Testing Verified: RIMA International US-006-20.
 5. Physical Properties:
 - a. Emissivity, ASTM C 1371: 0.03.
 - b. Reflectivity: 0.97.
 - c. Corrosiveness, ASTM D 3310: Passes.
 - d. Fire Rating, ASTM E 84: Class 1 / Class A.
 - e. Bleeding and Delamination, ASTM C 1313: No bleeding or delamination.
 - f. Pliability, ASTM C 1313: No cracking or delamination.
 - g. Tear Resistance, ASTM D 2261:
 - 1) Length: 14.93.
 - 2) Width: 15.13.
 - h. Water Vapor Permeability, ASTM E 96: 0.01 perms.
 - i. Resistance to Fungi, ASTM C 1338: Passes.
 - j. Shielding Effectiveness, IEEE 299, ASTM D 4935, 100 MHz to 10 GHz: 85 dB.
 - k. Weight, 500 sq ft: 15 lbs.

2.3 ACCESSORIES

- A. Aluminum Foil Adhesive Tape: "rFOIL 15512" or "rFOIL 15513".

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive radiant barrier.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

- A. Install radiant barrier in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Cover all wall, ceiling, and floor surfaces with radiant barrier.
- C. Attach radiant barrier to framing in accordance with manufacturer's instructions.
- D. Overlap joints of radiant barrier a minimum of 6 inches.
- E. Seal seams of radiant barrier with aluminum foil adhesive tape furnished by radiant barrier manufacturer.
- F. Extend radiant barrier across joint where walls meet ceilings, so that radiant barrier extends a minimum of 6 inches onto ceilings.
- G. Extend radiant barrier across joint where walls meet floors, so that radiant barrier extends a minimum of 6 inches onto floors.
- H. Install radiant barrier to floors and ceilings, extending radiant barrier to walls to cover previously installed 6-inch overlap.

3.3 PROTECTION

- A. Protect installed radiant barrier from damage during construction.

END OF SECTION