

## SECTION 072110 - SPRAY-IN-PLACE RIGID URETHANE FOAM INSULATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes spray polyurethane foam insulation with ignition barrier coating.
- B. Related Sections include the following:
  - 1. Division 05 Section "Cold-Formed Metal Framing" for coordination with application of spray-applied foam insulation.
  - 2. Division 07 Section "Building Insulation."

#### 1.3 SUBMITTALS

- A. General: Submit in accordance with Division 01 Section "Submittal Procedures."
- B. Product Data: For each type of product indicated.
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product.

#### 1.4 QUALITY ASSURANCE

- A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers with labels indicating manufacturer, product name and designation, and directions for storing and mixing with components.
- B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes. Store materials covered, out of direct sunlight, and at temperatures between 60 deg F and 70 deg F.
- C. Dispose of empty containers by technicians in accordance with manufacturer's recommendations, current law, and industry standard practice.

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1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply material when ambient or substrate temperature is 50 deg F or lower unless temporary protection and heat are provided to maintain temperature at or above this level for 24 hours before, during, and for 24 hours after product application. Do not apply material when moisture due to dew, frost or water is present on substrate materials.

PART 2 - PRODUCTS

2.1 SPRAY POLYURETHANE FOAM (SPF) INSULATION

- A. Closed-Cell Polyurethane Foam Insulation (SPF): ASTM C 1029, Type II, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84; with non-ozone depleting blowing agent.
1. Density: ASTM D 1622; minimum density of 2.0 lb/cu. ft.
  2. Thermal Resistivity (R-Factor), LTTR: Not less than 6.4 per inch of thickness.
  3. Closed Cell Content: ASTM D 2856, 90 percent minimum.
  4. Vapor Permeance: ASTM E 96, 1-inch thickness, 1.2 perms maximum.
  5. Fungi Resistance: ASTM C 1338, no growth.
  6. Applied Thickness: Apply to provide a cured thickness as indicated. Where thickness is not indicated, provide a cured thickness of not less than 2-1/2 inches and not more than 4 inches.
  7. Locations: Exterior columns, at exterior beams, exterior window headers, underside of floor metal deck, and where indicated.
  8. Products:
    - a. JM Corbond III SPF; Johns Manville Corporation.
    - b. CertaSpray Closed Cell Foam; CertainTeed Corporation.
    - c. Heatlok Soy; Demilec LLC, Arlington, TX.
- B. Ignition Barrier (IB) Coating: Single-component, water-based, intumescent coating designed for application as an ignition barrier on closed-cell polyurethane foam insulation, manufactured or approved by SPF manufacturer.

2.2 AUXILIARY INSULATING MATERIALS

- A. Eave Ventilation Channel (Insulation Baffle): Preformed, rigid, PET plastic sheets with molded rib reinforcing; designed and sized to fit between roof framing members, 48-inch lengths, to provide cross ventilation between insulated attic spaces and vented eaves. Polystyrene foam baffles are not acceptable.
1. Product: ProVent; ADO Products; distributed by IDI Distributors, Inc.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Mask and cover items not indicated to receive insulation, protecting from fallout or overspray of materials during application.

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- B. Brush down substrates to loosen and remove cobwebs, dirt, dust and debris. Upon completion of operations, substrate shall be clean of substances that are harmful to insulation or that interfere with insulation attachment.

3.2 INSTALLATION OF SPRAY POLYURETHANE FOAM INSULATION

- A. Spray-Applied Insulation: Apply spray-applied insulation according to manufacturer's written instructions. Apply in consecutive passes as recommended by the manufacturer to achieve specified thickness.
- B. Apply insulation to seal voids at interface of top of walls and roof deck.
- C. To the maximum extent possible, apply insulation as uniformly and smooth as possible to receive application of ignition barrier coating.
- D. Where SPF is applied to metal deck, coat SPF with ignition barrier coating to manufacturer's required dry film thickness,

3.3 CLEANING

- A. Cleaning: Remove material overspray, and protection materials from surfaces of other construction and clean exposed surfaces. Remove trash and debris from the project site and properly dispose of.

END OF SECTION 072110