

SECTION 07 21 19 - FOAMED-IN-PLACE INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Closed-cell spray polyurethane foam insulation.

B. Related Requirements:

1. Section 07 21 00 "Thermal Insulation" for foam-plastic board insulation.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Sustainable Design Submittals:

1.3 INFORMATIONAL SUBMITTALS

A. Field quality control reports.

B. Qualification Statements: For Installer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

PART 2 - PRODUCTS

2.1 CLOSED-CELL SPRAY POLYURETHANE FOAM INSULATION

A. Closed-Cell Spray Polyurethane Foam: ASTM C1029.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. Carlisle Spray Foam Insulation
- b. Gaco; Amrize Building Envelope LLC
- c. Johns Manville; a Berkshire Hathaway company

- d. Quadrant Performance Materials
 - e. Thermoseal USA
- 2. Type and Minimum Compressive Strength:
 - a. Type II, minimum density of 1.5 lb/cu. ft. and minimum aged R-value at **1-inch** thickness of **6.2 deg F x h x sq. ft./Btu at 75 deg F**.
- 3. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less.
 - b. Smoke-Developed Index: 450 or less.
 - c. Fire-Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.
- 4. Fire-Safety Barriers: Approved assembly as thermal barrier and ignition barrier with accessory components.

2.2 ACCESSORIES

- A. Prescriptive Thermal Barriers: Building-code-approved materials.
 - 1. Gypsum Board: **1/2-inch** minimum thickness.
 - 2. Wood Structural Panels: **23/32-inch** thickness.
 - 3. Plywood: Nominal **1/2-inch** minimum thickness.
 - 4. Heavy timber in accordance with the IBC.

PART 3 - EXECUTION

3.1 INSTALLATION OF FOAMED-IN-PLACE INSULATION

- A. Comply with insulation manufacturer's written instructions applicable to products and applications.
- B. Spray insulation to envelop entire area to be insulated and fill voids.
- C. Apply in multiple passes to not exceed maximum thicknesses recommended by manufacturer. Do not spray into rising foam.
- D. Framed Construction: Install into cavities formed by framing members to achieve thickness indicated on Drawings.
- E. Cavity Walls: Install into cavities to fully fill void.
- F. Miscellaneous Voids: Apply according to manufacturer's written instructions.
- G. Install **[thermal][ignition]** barrier material.

1. Do not cover insulation prior to any required spray foam insulation inspections.
- H. Apply barrier coatings in accordance with manufacturer's written instructions and to comply with requirements for listing and labeling for fire-propagation characteristics and surface-burning characteristics specified.
1. Use equipment and techniques best suited for substrate and type of material applied as recommended by coating manufacturer.
 2. Apply coatings to prepared surfaces as soon as practical after preparation and before subsequent surface soiling or deterioration.
 3. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Produce sharp lines and color breaks.

3.2 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect spray foam insulation installation, including accessories. Report results in writing.

END OF SECTION 07 21 19

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