

**SECTION 07 21 19**  
**FOAMED-IN-PLACE INSULATION**

**PART 1 - GENERAL**

**1.1 RELATED WORK**

- A. Thermal and acoustical insulation: Section 07 21 13 thermal insulation.

**1.2 SUMMARY**

- A. Section Includes:
  - 1. Closed-cell spray polyurethane foam.
  - 2. Radiant barrier.

**1.3 SUBMITTALS**

- A. Product Data: For each type of product.
- B. Qualification Data: For Installer.
- C. Product Test Reports: For each product, for tests performed by a qualified testing agency.
- D. Evaluation Reports: For spray-applied polyurethane foam-plastic insulation, from ICC-ES.

**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**

- A. Closed-Cell Spray Polyurethane Foam: ASTM C 1029, Type II, minimum density of 1.5 lb/cu. ft. (24 kg/cu. m) and minimum aged R-value at 1-inch (25.4-mm) thickness of 6.2 deg F x h x sq. ft./Btu at 75 deg F (43 K x sq. m/W at 24 deg C).
  - 1. Surface-Burning Characteristics: Comply with ASTM E 84; 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.
  - 2. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

## **2.2 OPEN-CELL SPRAY POLYURETHANE FOAM- NOT USED**

## **2.3 MISCELLANEOUS MATERIALS**

- A. Primer: Material recommended by insulation manufacturer where required for adhesion of insulation to substrates.

## **2.3 RADIANT BARRIERS**

- A. Interior Radiation Control Coating System: Manufacturer's standard-colored, not thickness-dependent, low-emissivity, water-based coating; formulated for adherence to substrates indicated and with a surface emittance value of 0.25 or less as measured per ASTM C 1371.  
International fireproof technologies, Inc. DC315.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Verify that substrates are clean, dry, and free of substances that are harmful to insulation.
- B. Priming: Prime substrates where recommended by insulation manufacturer. Apply primer to comply with insulation manufacturer's written instructions. Confine primers to areas to be insulated; do not allow spillage or migration onto adjoining surfaces.

### **3.2 INSTALLATION**

- 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 R-value indicated on Drawings.
- E. Cavity Walls: Install into cavities between studs the full height of wall to achieve R-value of R-21.
- F. Roof Construction: Install over roof deck and framing and into cavities at wall/roof juncture to achieve R-value indicated on drawings.
- G. Miscellaneous Voids: Apply according to manufacturer's written instructions.

### **3.3 PROTECTION**

- A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes.

#### **3.4      INSTALLATION OF RADIANT BARRIERS**

- A.    Install interior radiation control coating system according to ASTM C 1321 to fully protect all spray-applied foam insulation in exposed and gypsum-covered applications.

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