



## **Core Foam Masonry Foam Insulation®—Specification Guide—AIA Long Form**

### **Section 07210: Building Insulation (Foamed-in-Place Insulation)**

#### **Part 1—General**

##### 1.02 SUMMARY

- A. Drawings and provisions of this section show the extent of work to be performed.
- B. Applications for foam insulation specified in this section include:
  - 1. Foam-in-place insulation in cavities of concrete masonry unit (CMU) walls and wythe area of exterior walls to improve thermal resistance of wall section.
  - 2. Foam-in-place insulation in interior and exterior CMU walls and stud-cavity walls to improve acoustical properties.

##### 1.03 SUBMITTALS

- A. “Product Information” provided by the supplier.
- B. Copy of results for ASTM E 84-01 “Surface Burning Characteristics of Building Materials.”
- C. Material Safety Data Sheet for Core Foam Masonry Foam Insulation.

##### 1.04 QUALITY ASSURANCE

- A. Foam insulation is to be installed by or under the supervision of a Core Foam Masonry Foam Insulation-trained installer.
- B. Products are supplied by manufacturer as concentrates and are to be blended by installer to insure consistent product reactivity.
- C. Core Foam Foaming Catalyst and Spray-Dried Polymeric Resin, once blended with water, are to be used in equal volumetric ratios.
- D. Periodic quality and density checks shall be performed by the installer in accordance with manufacturer’s guidelines.

## Part 2—PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

Foam insulation is manufactured locally at the job site using products supplied by:

cfiFOAM, Inc.  
PO Box 10393  
Knoxville, TN 37939  
800-656-3626

Substitutions are not allowed.

### 2.02 INSULATING MATERIALS—Typical Performance Values

- A. ASTM E-84 Surface Burning Characteristics:
  - a. Flame Spread: 25 or Less
  - b. Smoke Generated: Less than 450
  - c. Thickness: 3.5 inches (maximum thickness allowed by test apparatus)
  - d. Tests performed by an independent, certified laboratory located within the United States of America.
  - e. Flammability Classification: Class A or Class I
- B. Thermal Conductivity of Foam Insulation:
  - a. k-value 0.20-0.25 BTU/(hr ft<sup>2</sup> °F in); 0.22, on average at 25 °F
  - b. R-Value 4.0-5.0 (hr ft<sup>2</sup> °F in)/BTU; 4.6 per inch, on average at 25 °F
- C. Shrinkage
  - a. Less than 2 percent
- D. Density of Cured Foam:
  - a. 0.6-0.8 lb/ft<sup>3</sup>

## Part 3—Execution

### 3.01 INSPECTION AND PREPARATION

- A. Wall assemblies suitable for application:
  - a. Concrete Masonry Unit Walls
  - b. Wall cavities with thickness from 2” to 12”
  - c. Enclosed Stud Wall Cavities

- B. Verify that the wall assembly is essentially dry with no standing water in the CMU cores and no visible wetness on the exterior surface.
- C. Verify that mortar has adequately cured prior to installation of foam insulation.
- D. Select the best location(s) for foam injection:
  - a. Preferentially in a wall surface that will be covered.
  - b. 5/8" – 7/8" holes to be drilled in masonry joints or directly in the CMU surface. Hole diameters up to 2" may be required for injection in stud cavity assemblies.
- E. Temperature of foam chemicals (resin and foaming catalyst) should be a minimum of 50°F prior to installation of insulation.
- F. Wall assembly should be maintained above 32°F to allow insulation to cure without freezing.

### 3.02 INSTALLATION GUIDELINES

- A. All open cells and voids within each wall shall be filled with foam insulation as specified on the drawings.
- B. Walls can be filled using either top-fill or, more commonly, pressure-injection techniques.
  - a. For top-fill, the installer must use an extension tube to begin installing foam from the bottom of the cavity, withdrawing the extension tube as foam fills the cavity.
  - b. For pressure-injection, small holes are drilled in each CMU, typically 5/8"-7/8" in diameter, at an approximate height of four feet from finished floor level. Normally each vertical core is drilled and injected with foam in 10'-14' lifts, although in 8" CMU, alternating cores can be used.
  - c. Core Foam Masonry Foam Insulation is injected until it completely fills each vertical core of block cells, evidenced by foam exiting the adjacent injection hole. Repeat steps b and c at an approximate height of 10'-24' above the initial row of injection holes, or as needed, until the wall is completely filled.
- C. After foam insulation sets, remove the excess from outside of cavity, sweeping the wall and floor as needed. Cured foam is an inert material and, therefore, can be disposed of with other construction waste in accordance with local regulations.
- D. Patch holes with mortar to resemble existing surface.
- E. Product should be protected from excess moisture during initial 24-hour curing period after installation. A 72-hour curing period is normally required prior to painting, however in each case the coatings contractor should test the walls to confirm the surface is suitable prior to paint application.

**END OF SECTION 07210**