# **Architectural Specifications**

This section covers Advanced Fiber Technology's AFT Carbon Smart<sup>™</sup> cellulose insulation, whether pneumatically blown dry into attics or floor assemblies or sprayed into open wall cavities.

## CSI 3 Part Category Thermal Insulation (07 21 00)

### Part 1 General

### 1.1 Section Includes

- A. Cellulose Insulation
  - a. Pneumatically blown into attics or floor assemblies
  - b. Sprayed into open wall cavities

### **1.2** Reference Standards

- A. ASTM C739 Standard Specification for Cellulosic Fiber Loose-Fill Thermal Insulation
- B. ASTM C1015 Standard Practice for Installation of Cellulosic and Mineral Fiber Loose-Fill Thermal Insulation
- C. ASTM C1149 Standard Specification for Self-Supported Spray Applied Cellulosic Insulation
- D. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- E. ASTM E119 Standard Test Method for Fire Tests of Building Construction and Materials

   a. Only for AFT Fire Shield (2 Hour Fire Wall)
- F. Consumer Product Safety Commission (CPSC) Standard 16 CFR Parts 460, 1209, and 1404
- G. California Department of Public Health (CDPH)/EHLB/Standard VOC Testing Method

### 1.3 Submittals

- A. Product Data: Submit manufacturer's product data sheet, including installation instructions.
- B. Warranty Documentation: Submit manufacturer's standard warranty.
- C. USGBC LEED MR Credit 4.1 and 4.2: Recycled content of products indicating % by weight.

### 1.4 Quality Assurance

- A. Manufacturer's Qualifications: Manufacturer should regularly be engaged in the manufacture of cellulose insulation for minimum 5 years.
- B. Manufacturer should utilize random NVLAP certified third party testing.
- C. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

### 1.5 Delivery, Storage, and Handling

- A. Materials should be delivered to the site in manufacturer's original and unopened packaging materials and should clearly contain manufacturer's name, product, and coverage chart.
- B. Protect from damage and store in a clean, dry area that is protected from the weather elements.

### Part 2 Products

### 2.1 Manufacturer

A. Advanced Fiber Technology, 100 Crossroads Blvd., Bucyrus, Ohio 44820. Phone 419-562-1337. Fax 419-562-9062. Website: <u>www.advanced-fiber.com</u>.

### 2.2 Thermal Insulation

- A. AFT Carbon Smart<sup>™</sup> and AFT Carbon Smart Plus<sup>™</sup> Cellulose Insulation Description:
  - a. Pneumatically blown dry into attics or floors
  - b. Sprayed into open wall cavities
- B. Material Description:
  - a. Recycled cellulose fibers treated with fire retardant chemicals.
  - b. Recycled Content: 85% minimum.
- C. Testing Compliance:
  - a. Flame Spread (ASTM C739) Equal to or greater than 12 watts/cm2
  - b. Smolder Resistance (ASTM C739) Less than 15%
  - c. Thermal Resistance (ASTM C739) 3.8 R per inch
  - d. Fungi Resistance (ASTM C739) Pass
  - e. Corrosion Resistance (ASTM C739) Pass
  - f. Odor Emission (ASTM C739) Pass
  - g. Moisture Absorption (ASTM C739) Pass less than 15%
  - h. ASTM E84
    - i. Flame Spread ≤10 (Max 25)
    - ii. Smoke Developed ≤20 (Max 450)
  - i. CDPH/EHLB/Standard VOC Testing Method
    - i. Low VOC Emissions Compliant ≤ ½ Chronic REL
    - ii. Low Formaldehyde Complaint  $\leq 9.0 \,\mu g/m3$
  - j. Testing to be conducted by independent NVLAP certified third party laboratory.

### Part 3 Execution

### 3.1 Examination

- A. Examine areas to receive cellulose insulation and notify architect or project manager of conditions that would adversely affect installation or subsequent use.
- B. Do not begin installation until unacceptable conditions are corrected.

#### 3.2 Preparation

- A. Protect adjacent surfaces, open pipes, electrical boxes, windows and doors, and floor openings.
- B. Prevent attic soffit vents from being plugged by cellulose insulation.
- C. Ensure all mechanical, plumbing, electrical and other utility installations have been completed before installing cellulose insulation.

### 3.3 Installation

- A. Install cellulose insulation in accordance with the manufacturer's instructions at locations shown on drawings.
- B. Install cellulose insulation to a uniform density without voids, gaps, or air pockets.
- C. Install cellulose insulation to depth to achieve required R-values.
- D. Ensure heat producing devices in attics have barriers constructed around them to prevent contact with cellulose insulation per building codes.
- E. Sprayed cellulose insulation should not be covered until installed moisture content is 25% or less.
- F. Follow the Cellulose Insulation Manufacturers Association (CIMA) technical bulletins #2 "Standard Practice for Installing Cellulose Insulation" and #3 "Standard Practice for the Installation of Sprayed Cellulosic Wall Cavity Insulation".

#### 3.4 Protection

- A. Installed cellulose insulation should be protected from damage during/after installation.
- B. Insulation should be removed in event of fire or water damage.