Architectural Specifications

This section covers Advanced Fiber Technology's AFT Carbon Smart™ 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: www.advanced-fiber.com.

2.2 Thermal Insulation

A. AFT Carbon Smart™ and AFT Carbon Smart Plus™ 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 ≤ 9.0 µg/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.