

# AFT Cellulose Insulation Specification

**“The Greenest of the Green”**

## 1. Scope

1.1 This specification provides data related to AFT cellulose insulation. AFT provides resistance to heat flow for thermal applications, noise control for acoustical treatments, and fire control in walls and attics of residential and commercial construction.

## 2. Materials

2.1 More than 85% of the content by weight of AFT cellulose insulation is processed from recycled wood-based cellulose fibers (post-consumer wastepaper). These fibers are chemically treated to create fire resistance. The additives will not irritate normal skin, will not attract vermin or insects, mold-resistant, non-corrosive, and will not adversely affect other building materials. AFT complies with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976.

## 3. Functions

3.1 AFT insulation resists heat flow by 1) trapping air within and 2) between fibers creating significant resistance to air movement. When applied, AFT cellulose insulation creates a “blanket” filling all spaces.

## 4. Material Characteristics

4.1 Conforms to the Consumer Products Safety Commission standards 16 CFR parts 1209 and 460 and ASTM C-739. Type II material per ASTM C1149 with dry adhesive.

### 4.1.1 Density

The density anticipated after long-term settling of dry applications was determined by the following specification: ASTM C-739 1.50 lb/ft<sup>3</sup>

### 4.1.2 Thermal Resistance

The average thermal resistance per inch was determined by test method: ASTM C518 (4 inch thick) 3.80 (R-value/inch)

### 4.1.3 Surface Burning Characteristics

Two surface burning characteristics are evaluated. They are Critical Radiant Flux using ASTM C-970 and Flame Spread using ASTM E-84. AFT meets or exceeds the requirements for these tests.

ASTM E-970 Greater than 0.12 watts/cm<sup>2</sup>

ASTM E-84 5 (Maximum per building code is 25)

4.1.4 **Smoke Developed Index** ASTM E-84: 5  
(Maximum per building code is 450)

### 4.1.5 Moisture Vapor Sorption

AFT meets the ASTM C-739 requirement of less than 15% maximum weight gain. Normal relative humidity variations will not adversely affect the insulation.

### 4.1.6 Non-Corrosiveness

When in contact with steel, copper, and aluminum, AFT was determined to be non-corrosive per ASTM C739.

### 4.1.7 Other Properties Tested

Additional ASTM C-739 tests passed include:

Odor Emission Smolder Resistance

Fungi Resistance

## 4.2 Standards

Conforms to CPSC standard 16 CFR Parts 1209 and 1404. In addition meets the test requirements of ASTM C739, E-84, and E-119. Complies with HH-I-515E.

## 4.3 Building Codes

Meets the requirements of thermal insulating products in IBC, CABO, BOCA, ICBO, and the Model Energy Code.

## 4.4 Fire Blocking

In wall cavities, AFT insulation is permitted as a fire block under Section 717.2.1 of the IBC when installed to a minimum depth of 14.5 inches.

## 4.5 Sound Transmission

The installed density of any cellulose insulation creates a noise control “blanket”. Effective sound control requires wall and ceiling systems to be air tight including entire perimeter to prevent sound flanking. Refer to Section III of GA-600-2018 Fire Resistance Design Manual (22<sup>nd</sup> Ed.) Insulation materials add 3 to 5 db of noticeable sound resistance to uninsulated walls.

## 4.6 Fire Walls

AFT cellulose insulation can be used in a one-hour fire wall per Section 721 of the International Building Code (IBC) and a two-hour fire wall (ASTM E-119) tested at Intertek Testing Services NA. Must use “AFT Fire Shield” for two-hour fire wall.

## 5. Low VOC / Formaldehyde

VOC ≤ ½ chronic REL and formaldehyde ≤ 9.0 µg/m<sup>3</sup> per California DPH/EHLB standards. No formaldehyde added.

## 6. Product Certification

Product certification is by a non-affiliated third party NVLAP accredited laboratory, R&D Services. Accreditation number 200265-0.

## 7. Installation

Installation to follow the Cellulose Insulation Manufacturers Association (CIMA) technical bulletins #2 “Standard Practice for Installing Cellulose Building Insulation”, #3 “Standard Practice for the Installation of Sprayed Cellulosic Wall Cavity Insulation, and ASTM C1015 “Standard Practice for Installation of Cellulosic and Mineral Fiber Loose-Fill Thermal Insulation. Installation to follow after all mechanical, electrical, and plumbing activities are completed. Follow local, state, and federal building codes.



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