



**ADVANCED
FIBER TECHNOLOGY**

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Loose-Fill Cellulose Insulation Specification

1. Scope

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

More than 85% of the content by weight of AFT cellulose insulation is processed from recycled wood-based cellulose fibers. These fibers are chemically treated to create fire resistance. The additives are non-toxic, will not irritate normal skin, will not attract vermin or insects, 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

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, which is impractical to achieve with batt materials.

4. Material Characteristics

All cellulose insulation sold in the U.S. must conform to the Consumer Products Safety Commission standards 16 CFR parts 1209 and 460. In addition, AFT meets all of the test requirements of ASTM C-739.

■ Density

The density anticipated after long-term settling of dry applications was determined by the following specification: ASTM C-739 1.5 lb/ft³

■ Thermal Resistance

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

■ 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 each test.
ASTM E-970 Greater than 0.12 watts/cm²
ASTM E-84 Less than 25

■ Smoke Developed Index

ASTM E-84 Less than 50

■ Moisture Vapor Sorption

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

■ Non-Corrosiveness

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

■ Other Properties Tested

Additional ASTM C-739 tests passed include:
Odor Emission
Smolder Resistance
Fungi Resistance
Building Codes

Properly installed AFT cellulose insulation meets the requirements for thermal insulating materials as contained in BOCA, CABO, ICBO, SBCCI, and the Model Energy Code.
Complies with HH-I-515E.

■ Fire Blocking

In wall cavities, AFT insulation is permitted as a fire block under Section 708.2.1 of the UBC when installed to a minimum depth of 14.5 inches.

■ Sound Transmission

The installed density of any cellulose insulation creates a noise control "blanket". The following is a comparison between an uninsulated and insulated wall with 2 x 4 wood studs 16" o.c. and 5/8" type X gypsum wallboard on each side (GA File No. WP 3605)

Uninsulated	30 to 34 STC
Insulated	42 to 45 STC

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-600-2003 Fire Resistance Design Manual (17th Ed.)

5. Product Certification

Product certification by an independent third party NVLAP accredited laboratory.

6. Installation

Follow the Cellulose Insulation Manufacturers Association (CIMA) technical bulletins #2 "Standard Practice for Installing Cellulose Building Insulation" and #3 "Standard Practice for the Installation of Sprayed Cellulosic Wall Cavity Insulation".