800-627-7536
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# Applegate Insulation

*Naturally* better insulation.

**1. Scope**

This specification provides information relevant to the installation of Applegate cellulose insulation in attics, walls, and floors using pneumatic equipment. Applegate insulation delivers superior R-value per inch, exceptional resistance to air infiltration, and superb sound-deadening qualities.

**2. Components**

Applegate insulation contains more than 85% recycled, natural cellulose fiber. A proprietary two-stage process injects dry and liquid fire retardants that penetrate and strengthen the fibers while providing permanent flame resistance.
When installed properly and under normal conditions of use, these additives are nontoxic to humans, will not adversely affect other building components, and actually help create an environment that is inhospitable to insects and rodents.

**3. Purpose**

3.1 Thermal Insulation

Applegate insulation helps buildings stay warmer in the winter and cooler in the summer by effectively controlling all 3 methods of heat transfer: convective, conductive, and radiant. Buildings are more comfortable and less expensive to operate and maintain. Research at universities and national laboratories has proven that cellulose can provide up to 50% better performance than fiberglass.

3.2 Acoustical Insulation

Applegate insulation provides superior sound attenuation, in large part, because it is blown or sprayed in. This provides a custom fit that eliminates the acoustical shortcuts that are created by batt insulations: gaps and voids in odd shaped cavities and around obstacles such as plumbing, air ducts, and wiring.

**4. National Standards**

Cellulose insulation sold in the U.S. must conform to CPSC Standards 16 CFR Parts 1209 & 1404. Applegate insulation also conforms to the requirements of ASTM Standard C-739-97. Applegate insulation is tested only by nationally certified, NAVLAP-approved laboratories.

4.1 Thermal Resistance

Thermal resistance calculated using ASTM C-518 is R-3.8 per inch.

4.2 Non-Corrosive

Applegate insulation is tested and certified to be non-corrosive in accordance with ASTM Standard C-739-97. The test regimen includes aluminum, copper, and steel.

4.3 Building Codes

Applegate insulation, when properly installed, meets the following building code requirements for thermal insulating materials: BOCA, CABO, ICBO, ICC, SBCCI, & the Model Energy Code.

4.4 Fire Safety

Applegate insulation meets or exceeds all necessary fire safety requirements conducted in accordance with ASTM standards:

| | |
|---|---|
| Critical Radiant Flux: | >0.12 w/cm$^2$ |
| Smoldering Combustion: | <15% |
| Flame Spread (ASTM E-84): | 15 |
| Smoke Developed (ASTM E-84): | 5 |
| Fuel Contribution (ASTM E-84): | 0 |

4.5 Density

As tested by federally required methods, the maximum anticipated density of Applegate insulation after long-term settling of dry application is determined by ASTM C-739-97 to be 1.6 lb/ft$^3$

4.6 Moisture Absorption

Applegate insulation complies with ASTM Standards that require less than 15% weight gain under test conditions. Normal relative humidity variations do not adversely affect the insulation.

4.7 Health and Indoor Air Quality

Applegate insulation does not contain fiberglass, formaldehyde, or other materials associated with increased health concerns.

| | |
|---|---|
| OSHA cancer warning? | No |
| Contains glass fibers? | No |
| Contains formaldehyde? | No |

4.8 Other Properties

Applegate insulation meets or exceeds ASTM C-739-97 tests for odor emission and fungi resistance.

4.9 Sound Control

Applegate insulation is an excellent choice for reducing sound transmission through walls, ceilings, and floors. The following Sound Transmission Class (STC) ratings demonstrate its effectiveness in attenuating noise. The higher the STC number, the greater the reduction in sound.

| | |
|---|---|
| Cellulose insulated wall: | 44 STC |
| Fiberglass insulated wall: | 39 STC |
| Uninsulated wall: | 35 STC |

[Cellulose wall rating from the Cellulose Insulation Mfrs. Assoc.; fiberglass and uninsulated wall STC ratings from Owens-Corning, "Noise Control Design Guide."]

*Blessed is the nation whose God is the Lord.* Psalms 33:12