

THERMOLOK™

ThermoSpray

100% Boron Cellulose Insulation

STANDARD SPECIFICATION FOR THERMOLOK THERMO SPRAY INSULATION

ASTM C 1149 Type II Self Supported Spray Applied Cellulose Insulation

1. Scope

1.1 This specification provides data pertinent to the pneumatic application of THERMOLOK THERMO SPRAY cellulose insulation in walls. THERMOLOK THERMO SPRAY cellulose insulation provides outstanding resistance to heat flow for thermal applications, noise control for acoustical treatments, and fire control in walls of residential and commercial construction.

2. Materials

2.1 More than 80% of the content of THERMOLOK THERMO SPRAY cellulose insulation is processed from recycled cellulose fiber. These fibers are chemically treated to create permanent flame 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.

3. Functions

3.1 Insulation. THERMOLOK THERMO SPRAY-cellulose insulation resists the flow of heat in three ways. Air is trapped (1) within, (2) by the wall of the fiber, and (3) between fibers creating significant resistance to air movement. This natural ability to trap air provides cellulose insulation with 25% to 40% more effective insulation power than the same R-Value of other dense packed loose-fill fibrous insulation materials.

3.2 Sound Control. These same isolated air pockets and density also provide effective noise reduction in walls and between floors by effectively creating a customized batt at the job site.

4. Material Characteristics

4.1 All cellulose insulation sold in the U.S. must conform to the Consumer Products Safety Commission (CPSC) standard 16 CFR Part 1209 and 1404. In addition, THERMOLOK cellulose meets all the test requirements of American Society of Testing and Materials (ASTM) C 739. Underwriter's Laboratories (UL) R 8296 tested the following properties:

4.1.1 Density

The maximum density anticipated after long-term settling of dry applications was determined by the following specifications:

ASTM C 739 1.6 lb/ft³ (23.2 kg/m³)

Wet spray applied material densities will vary between 2.7 lb/ft³ and 3.5 lb/ft³ depending on application techniques.

4.1.2 Thermal Resistance

The average thermal resistance per inch was determined by test method ASTM C 518 (4 in. thick):

ASTM C 739 3.7 (R-Value/in)

4.1.3 Surface Burning Characteristics

Two surface burning characteristics are evaluated. They are Critical Radiant Flux using test method ASTM E 970, and Flame Spread using ASTM E 84. THERMOLOK cellulose insulation meets or exceeds the specified requirements for each test as follows:

ASTM E 970 greater than 0.12 watts/cm

ASTM E 84 less than 25

4.1.3.1 Building Codes

Properly installed THERMOLOK THERMO SPRAY cellulose insulation meets the requirements for thermal insulation materials set forth in CABO, ICBO, BOCA, SBCCI and the Model Energy Code.

4.1.4 Moisture Vapor Sorption

This requirement assures that normal variations in relative humidity will not adversely affect thermal resistance. THERMOLOK THERMO SPRAY insulation meets the requirements of less than 15% for maximum weight gain under the specified test conditions.

4.1.5 Corrosiveness

When in contact with steel, copper, aluminum, or galvanized materials, THERMOLOK cellulose insulation was determined to be non-corrosive.

4.1.6 Other Properties Tested

THERMOLOK THERMO SPRAY cellulose insulation passed these additional tests:

Odor Emission	Flame Spread Permanency
Fungi Resistance	Smolder Resistance
Acute Toxicity Study	EPA Registration



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