

# ICC-ES Evaluation Report

**ESR-1134**

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This report is subject to re-examination in one year.

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**DIVISION: 07 00 00—THERMAL AND MOISTURE  
PROTECTION**
**Section: 07 21 00—Thermal Insulation**
**REPORT HOLDER:**
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**EVALUATION SUBJECT:**
**ULTRATOUCH NATURAL COTTON FIBER INSULATION**

## 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

**Properties evaluated:**

- Surface burning characteristics
- Thermal transmission properties
- Materials properties—thermal insulation materials

## 2.0 USES

UltraTouch Natural Cotton Fiber Insulation is unfaced batt insulation used as concealed thermal insulation in walls, floors, ceilings, attics and crawl spaces.

## 3.0 DESCRIPTION

### 3.1 General:

UltraTouch Natural Cotton Fiber Insulation is a nonwoven, unfaced batt insulation consisting of post-industrial recycled denim and cotton fibers. UltraTouch is treated with a borate solution. UltraTouch is manufactured in standard 3.5- and 5.5-inch (89 and 140 mm) thicknesses at both 16- and 24-inch (406 and 610 mm) widths. All sizes are manufactured at a density of 1.2 pounds per cubic foot (19.2 kg/m<sup>3</sup>).

### 3.2 Surface Burning Characteristics:

The insulation, at a thickness of 3 inches (76 mm) and a density of 1.2 pounds per cubic foot (19.2 kg/m<sup>3</sup>), has a flame-spread index (FSI) of less than 25 and a smoke-developed index (SDI) of less than 450 when tested in accordance with ASTM E 84.

### 3.3 Thermal Transmission Value:

The insulation has a thermal transmission (*R*-value) of 3.94 ft<sup>2</sup>•h•°F/Btu (0.694 m<sup>2</sup>•K/W) at a 1-inch (25.4 mm) thickness.

## 4.0 INSTALLATION

### 4.1 General:

UltraTouch Natural Cotton Fiber Insulation must be installed in accordance with the manufacturer's published installation instructions and this report. The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation.

The instructions within this report govern if there are any conflicts between the manufacturer's published installation instructions and this report.

### 4.2 One-hour Fire-resistance-rated Nonload-bearing Wall Assembly:

The assembly consists of minimum nominal 2-by-4 southern yellow pine wood studs spaced 16 inches (406 mm) on center with double 2-by-4 top plates and single 2-by-4 bottom plates with fire blocking installed at mid-height of the frame. Both sides of the wall must be finished with one layer of 5/8-inch (15.9 mm), Type X gypsum wallboard. The wallboard must be fastened with 1 5/8-inch (41 mm), No. 6 drywall screws spaced 8 inches (203 mm) on center at perimeter joints and 12 inches (305 mm) on center in the field of the wallboard. All joints must be taped and treated with joint compound, and all fastener heads must be covered with joint compound. Stud cavities must be filled with 3 1/2-inch-thick (89 mm) UltraTouch Natural Cotton Fiber Insulation. The wall must be a nonload-bearing wall limited to a maximum height of 9 feet (2.7 m).

## 5.0 CONDITIONS OF USE

The UltraTouch Natural Cotton Fiber Insulation described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 This evaluation report and the manufacturer's published installation instructions, when required by the code official, must be submitted at the time of permit application.
- 5.2 The insulation must be manufactured, identified and installed in accordance with this report and the Boricel Corporation instructions.

- 5.3 The insulation must not be installed over recessed light fixtures or against any heat-producing appliance.
- 5.4 The insulation may be used in fire-resistance-rated construction as described in Section 4.2 of this evaluation report.
- 5.5 Installation of the insulation must not be adjacent to areas where it may be subjected to open flame or heat producing devices or equipment.

#### **6.0 EVIDENCE SUBMITTED**

- 6.1 Data in accordance with ICC-ES Evaluation Guideline for Cotton Fiber Insulation (EG81), dated March 1, 2004.

6.2 Test report in accordance with ASTM E 119.

6.3 A quality control manual.

#### **7.0 IDENTIFICATION**

Each package of UltraTouch Natural Cotton fiber Insulation batts covered by this report must be labeled with the Boricel Corporation name and address and the evaluation report number (ESR-1134). The label must also include the FSI, SDI and *R*-value of the product.