

UL Evaluation Report



UL ER26300-01

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UL Category Code: ULEX

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DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Sub-level 2: 07 20 00 – Thermal Protection
Sub-level 3: 07 21 00 – Thermal Insulation
Sub-level 4: 07 21 16 – Blanket Insulation

COMPANY:

Cellulose Material Solutions, LLC
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1. SUBJECT:

ECOCELL BATT AND BLANKET INSULATION AND SEAL-BLOCK CELLULOSIC FIBER BATT AND BLANKET INSULATION

2. SCOPE OF EVALUATION

- 2012 and 2009 *International Building Code*® (IBC)
- 2012 and 2009 *International Residential Code*® (IRC)
- ICC-ES Acceptance Criteria for Quality Documentation (AC10), dated June 2014

The products were evaluated for the following properties:

- Surface Burning Characteristics (ANSI/UL723, ASTM E84)
- Thermal Resistance (ASTM C518)
- Corrosiveness (ASTM C739)
- Moisture Vapor Sorption (ASTM C739)
- Odor Emission (ASTM C1304)
- Critical Radiant Flux (ASTM E970)
- Fungi Resistance (ASTM C1338)
- Sound Transmission Classification (ASTM E90-04)

3. REFERENCED DOCUMENTS

- ICC-ES Acceptance Criteria for Quality Documentation (AC10), dated June 2014
- ANSI/UL 723, 10th Ed. (ASTM E84), Test for Surface Burning Characteristics of Building Materials
- ASTM C518-10, Standard Test Method for the Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- ASTM C739-11, Standard Specification for Cellulosic Fiber Loose-Fill Thermal Insulation
- ASTM C1304-08 (2013), Standard Test Method for Assessing the Odor Emission of Thermal Insulation Materials
- ASTM E970-14, Standard Test Method for Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source
- ASTM C1338-14, Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings
- ASTM C1015-06 (2011), Standard Practice for Installation of Cellulosic and Mineral Fiber Loose-Fill Thermal Insulation
- ASTM E90-04, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- ASTM E413-10, Classification for Rating Sound Insulation
- FTC 16 CFR Part 460, Labeling and Advertising of Home Insulation: Trade Regulation Rule; Final Rule, dated May 31, 2005

4. USES

ECOCELL and SEAL-BLOCK Batt and Blanket Insulations are used as thermal insulation on or within walls, floors, ceilings, attics, basements, and crawl spaces in buildings of any type construction.

5. PRODUCT DESCRIPTION

5.1 General

ECOCELL and SEAL-BLOCK Batt and Blanket Insulations are cellulosic insulation materials consisting of a uniform medium-density mixture of recycled cellulosic fibers and other proprietary fibers.

ECOCELL insulation is supplied as unfaced batts and blankets at nominal thicknesses of 1-1/2 inches (38 mm), 2-1/2 inches (63.5 mm), 3-1/2 inches (89 mm) and 5-1/2 inches (140 mm), at a nominal density of 2.5 pcf (40.0 kg/m³).

SEAL-BLOCK insulation is supplied as foil-faced batts and blankets at a nominal thickness of 3 inches (76 mm) at a nominal density of 3.6 pcf (57.7 kg/m³).

Batts are supplied in packages of several pieces cut to length. Blankets are supplied in rolls of varying lengths and widths.

5.2 Surface-burning Characteristics

ECOCELL and SEAL-BLOCK insulations have a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with UL 723 (ASTM E84) as set forth in [Section 720](#) of the 2012 IBC, [Section 719](#) of the 2009 IBC, or [Section R302.10](#) of the 2012 or 2009 IRC.

5.3 Thermal Resistance

ECOCELL and SEAL-BLOCK insulations have an average thermal resistance, or R-value, of nominally 3.6 °F-ft²-h/Btu per inch of thickness, at a mean temperature of 75 °F, when tested at a thickness of 3.5 in. The product packaging and Fact Sheets shall contain coverage information as required by FTC 16 CFR Part 460 and with [Section N1101.12.1](#) and [Section N1101.12.2](#) of the 2012 IRC, or [Section N1101.4](#) of the 2009 IRC

5.4 ASTM C739 Properties

ECOCELL and SEAL-BLOCK insulations are primarily composed of cellulose fibers. Accordingly, the products have additionally been evaluated and determined to be in compliance with the following ASTM C739 properties:

Property	Tested in Accordance with
Odor Emission	ASTM C739/C1304
Critical Radiant Flux	ASTM C739/E970
Corrosiveness	ASTM C739
Fungi Resistance	ASTM C739/C1338
Moisture Vapor Sorption	ASTM C739

5.5 Sound Transmission and Sound Absorption

The product described in this section has been evaluated in accordance with ASTM E90 for use as a part of a Sound Transmission Rated Assembly.

5.5.1 Sound transmission classification (STC) rating for the following wall assembly is 50.

Insulated Steel Stud Wall Panel:

1. The wall consisted of a 25 gauge steel stud frame assembly with a layer of 0.625 in. (16 mm) thick gypsum board screw attached to both sides of the frame at nominal 12 in. (305 mm) on center. The studs were attached to the top and bottom runners spaced on 24 in. (610 mm) centers. The cavities between the studs were filled with the 3.5 in. ECOCELL cellulose batt insulation described in section 5.

6. INSTALLATION

ECOCELL and SEAL-BLOCK insulations are friction-fit installed into stud cavities and between joists and rafters, direct applied to basement or crawlspace walls, or loosely laid over ceiling joists. The products are for use in walls, floors, floor-ceiling or roof-ceiling assemblies, attics, crawl spaces, basements and partitions. When installed in crawl spaces, application should begin at least 1-1/2 inches (38 mm) from the floor using a nominally 2 ft. by 4 ft. wood spacer. Consult manufacturer's installation instructions for direct wall application.

When placed adjacent to recessed light fixtures, metal chimneys or other heat-producing elements, a permanent barrier is necessary to maintain a required 3 inch (76 mm) clearance between the item and the insulation as applicable for the fixture or appliance, unless the recessed light fixture is identified by the letters "IC" and is listed for direct contact with insulation, in accordance with [Section E4004](#) of the 2012 or 2009 IRC. The insulation must not be placed where temperatures exceed 194 °F (90 °C), in accordance with [Section E4003.2](#) or the 2012 or 2009 IRC. Attic vents must not be blocked by the application of the insulation when installed, in accordance with [Section R806.3](#) of the 2012 or 2009 IRC.

The products must be installed in accordance with the manufacturer's installation instructions, this report, and ASTM C1015 (as applicable) and the applicable code. The manufacturer's installation instructions must be available at all times on the jobsite during installation.

7. CONDITIONS OF USE

7.1 General

The ECOCELL and SEAL-BLOCK Batt and Blanket insulations described in this report comply with, or are suitable alternatives to, what is specified in those codes listed in Section 2 of this report, subject to the following conditions:

- 7.2 The products in this report must be installed in accordance with the manufacturer's published installation instructions, the applicable code, and this report. In the event of a conflict between the manufacturer's published installation instructions and this report, the report shall govern.
- 7.3 Use of the insulation as a component in fire-resistance rated construction is outside the scope of this report.
- 7.4 The insulation must not be installed adjacent to areas where it is subject to open flame or heat-producing devices or equipment.
- 7.5 Use of the insulation as a fire-blocking material, as described in [Section 718.2](#) of the 2012 IBC, is outside the scope of this report.
- 7.6 See UL Online Certifications Directory for Batts and Blankets, File R26300 ([BKNV](#)).
- 7.7. ECOCELL and SEAL-BLOCK Batt and Blanket insulations are manufactured by Cellulose Material Solutions, LLC, located at the manufacturing location named below, under the UL LLC Classification and Follow-Up Service Program, which includes audits in accordance with ICC-ES Acceptance Criteria for Quality Documentation, AC10:

Jenison, Michigan

8. SUPPORTING EVIDENCE

- 8.1 Manufacturer's published installation instructions.
- 8.2 UL Classification reports in accordance with ANSI/UL 723 (ASTM E84), Test for Surface Burning Characteristics of Building Materials. See UL Product Certification Category for Batts and Blankets, File R26300 ([BKNV](#)).
- 8.3 Reports of testing in accordance with ASTM C518, ASTM C739, ASTM C1304, ASTM C1338, and ASTM E970.
- 8.4 Documentation of quality system elements described in AC 10.

9. IDENTIFICATION

The ECOCELL and SEAL-BLOCK Batts and Blankets insulations described in this evaluation report are identified by a marking on the packaging bearing the report holder's name (Cellulose Material Solutions, LLC), the plant identification, the UL Classification Mark, and the evaluation report number UL ER26300-01.

Additionally, each package must bear a label with information required by FTC 16 CFR Part 460 and with [Section N1101.12.1](#) and [Section N1101.12.2](#) of the 2012 IRC, or [Section N1101.4](#) of the 2009 IRC.

10. USE OF UL EVALUATION REPORT

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