

ICC-ES Evaluation Report

ESR-2921

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DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07210—Building Insulation**REPORT HOLDER:****CELLULOSE MATERIAL SOLUTIONS, LLC**
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Chrenka@cmsgreen.com**EVALUATION SUBJECT:****ECOCELL BATT AND BLANKET INSULATION****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2009 *International Building Code*® (IBC)
- 2009 *International Residential Code*® (IRC)
- 2009 *International Energy Conservation Code*® (IECC)

Properties evaluated:

- Surface-burning characteristics
- Thermal resistance
- Material properties—thermal insulation materials
- Attic and crawl space applications

2.0 USES

ECOCELL Batt and Blanket Insulation is used as thermal insulation in walls, floors, ceilings, attics and crawl spaces in buildings of any type construction.

3.0 DESCRIPTION**3.1 General:**

ECOCELL Batt and Blanket Insulation is a cellulosic insulation material consisting of a uniform low-density mixture of recycled cellulosic fibers, proprietary fibers and chemicals. The insulation is supplied as an unfaced batt or blanket at a nominal thickness of 3¹/₂ inches (88.9 mm) and nominal density of 2.5 pounds per cubic foot (4.0 kg/m³). Batts are supplied in packages of several pieces cut to length. Blankets are supplied in rolls of varying lengths.

3.2 Surface-burning Characteristics:

The insulation, at a nominal thickness of 3¹/₂ inches (88.9 mm), has a flame-spread index of 25 or less and a smoke-

developed index of 450 or less when tested in accordance with ASTM E 84.

3.3 Thermal Transmission Values:

The insulation has a thermal transmission (*R*-value) of 13°F-ft²-h/Btu at a mean temperature of 75°F (23.9°C), when tested at a thickness of 3¹/₂ inches (88.9 mm) in accordance with ASTM C 518.

4.0 INSTALLATION**4.1 General:**

ECOCELL Batt and Blanket 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 Applications:

ECOCELL Batt and Blanket Insulation is used as a nonstructural thermal insulating material in buildings of all types of construction. The insulation is for use within walls, floors, floor-ceiling or roof-ceiling assemblies, attics, crawl spaces, basements and partitions. The insulation is installed in concealed spaces of walls, partitions, or roof-ceiling assemblies, or exposed on horizontal and sloped attic floors or crawl spaces. When placed adjacent to recessed light fixtures, metal chimneys or other heat-producing elements, a permanent barrier is necessary to maintain required 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. The insulation must not be placed where temperatures exceed 180°F (83.5°C). Attic vents must not be blocked by the application of the insulation.

4.3 Installation:

ECOCELL Batt and Blanket Insulation is installed into its final position by friction-fit in stud cavities and between joists and rafters, or is loosely laid over ceiling joists. Insulation must be installed in accordance with this report, the Cellulose Material Solutions installation instructions and ASTM C 1015.

The insulation can be cut to size with a circular saw equipped with a masonry saw blade. When applying in crawl spaces, application should begin at least 3¹/₂ inches (89 mm) from the floor using a nominally 2-by-4 wood spacer.

5.0 CONDITIONS OF USE

The ECOCELL Batt and Blanket 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 Cellulose Materials Solutions, LLC, instructions.
- 5.3 Use of the insulation as a component in fire-resistance-rated construction is outside the scope of this report.
- 5.4 The insulation must not be installed adjacent to areas where it is subject to open flame or heat-producing devices or equipment.
- 5.5 Use as a fire-blocking material, as described in Section 717.2.1 of the IBC, is outside the scope of this report.

6.0 EVIDENCE SUBMITTED

- 6.1 Test reports on material properties in accordance with ASTM C 167 (design density), ASTM C 1304 (odor emission), ASTM E 970 (critical radiant flux), ASTM C 739 (corrosion and moisture vapor resistance), and ASTM C 1338 (fungi resistance).
- 6.2 Test report on thermal transmission in accordance with ASTM C 518.
- 6.3 Test report on surface-burning characteristics in accordance with ASTM E 84.
- 6.4 Quality documentation.

7.0 IDENTIFICATION

Each package of ECOCELL Batt and Blanket Insulation covered by this report must be labeled with the Cellulose Materials Solutions, LLC, name and address and the evaluation report number (ESR-2921). The label must also include the flame-spread index, smoke-development index, and *R*-value of the product.