

UL Evaluation Report

UL ER25876-02

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DIVISION: 06 00 00 — WOOD, PLASTIC AND COMPOSITES
Sub-level 2: 06 70 00 - Structural Composites

COMPANY:

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1. SUBJECT:

Envision Distinction™, Envision Inspiration™, and Envision Expression™ Composite Lumber for Use as Exterior Cladding

2. SCOPE OF EVALUATION

- 2018, 2015, 2012 *International Building Code*® (IBC)
- 2018, 2015, 2012 *International Residential Code*® (IRC)
- 2017 *Florida Building Code* (FBC)
- 2019 *California Building Code* (CBC), Title 24 Part 2
- 2019 *California Residential Code* (CRC), Title 24, Part 2.5
- ICC-ES Acceptance Criteria for Quality Documentation (AC10), dated January 2018



The products were evaluated for the following properties:

- Surface Burning Characteristics
- Physical Properties
- Fire Penetration
- Use in California Wildland Urban Interface Fire Areas
- Termite Resistance
- Decay Resistance

3. REFERENCED DOCUMENTS

- UL 723 (ASTM E84), Test for Surface Burning Characteristics of Building Materials
- ASTM D7032, Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails)
- ASTM E2707, Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure
- SFM 12-7A-1 Exterior Wall Siding and Sheathing (2019 California Reference Standards, Title 24 Part 12)
- ICC-ES Acceptance Criteria for Quality Documentation (AC10), dated January 2018

4. USES

Envision® Composite Lumber boards are for use as exterior cladding panels in buildings of Type V-B construction.

5. PRODUCT DESCRIPTION

5.1 General:

Envision Distinction™, Envision Inspiration™, and Envision Expression™ Composite Lumber boards are a compression molded composite material comprised of part wood fiber and part plastic. Envision® Composite Lumber boards are nominal 1" x 6" (actual 7/8" x 5 1/2") in size, available in 12', 16', and 20' lengths, provided in square edge profiles only, for use as exterior wall cladding, and offered in the following colors: GreyWood, Rustic Walnut, Shaded Auburn, Spiced Teak, Barnwood Plank, Tangled Twine, Weathered Wicker, Caribou Brown, Canyon Ridge, Harbor Grey, and Woodland Bark.

Envision® Composite Lumber boards for use as exterior wall covering are non-load bearing, in accordance with 2018, 2015, 2012 IBC Section 601 and 2018, 2015, 2012 IRC Section R703, and have not been evaluated for structural purposes. They are intended to be installed over a water resistant barrier, in accordance with 2018, 2015, 2012 IBC Section 1402.2 and 2018, 2015, 2012 IRC Section R703.2. Flashing around wall openings, such as doors, windows and other penetrations shall be installed in accordance with 2018, 2015, and 2012 IBC Section 1404.4; 2018 and 2015 IRC Section R703.4, and 2012 IRC Section R703.8.

5.2 Standard Specification for Plastic Composite

Envision® Composite Lumber boards have been investigated for standardized physical specification and performance in accordance with ASTM D7032 as required by the 2018, 2015, and 2012 IBC Section 2612. This includes, flexural tests, temperature and moisture effects, UV resistance, freeze-thaw resistance, biodeterioration, and fire performance.

5.3 Flame Spread Index

Envision® Composite Lumber boards have a flame spread index of less than 200 when tested in accordance with UL 723 (ASTM E84), as required by the 2018, 2015, and 2012 IBC, Section 2612.3.

5.4 Termite and Decay Resistance

Envision® Composite Lumber boards have demonstrated resistance to decay and termite attack (including Formosan termites) as required by 2018, 2015, 2012 IBC Section 2612.4. Resistance was found equivalent to that of preservative-treated or the heartwood of naturally durable wood used in identical applications.

5.5 California Wildland Urban Interface Fire Areas

Envision® Composite Lumber boards have been evaluated to be acceptable for use in California Wildland Urban Interface Fire Areas, in accordance with Chapter 7A of the 2019 California Building Code (Title 24 Part 2), Section R337 of the 2019 California Residential Code (Title 24, Part 2.5), and SFM 12-7A-1 (2019 California Reference Standards Code, Title 24, Part 12).

6. INSTALLATION

6.1 General:

Envision® Composite Lumber boards for use as exterior cladding shall be installed in accordance with the applicable code, this report and the manufacturer's published installation instructions, which shall be available at all times on the jobsite during installation.

Envision® boards for use as cladding are available in square edge profiles only and shall be fastened using screws. They may be fastened using Envision Composite Deck Screws or other corrosion resistant wood/composite screws sized a minimum of #8 – 2½ or longer, perpendicular to the surface of the board. The fasteners shall be spaced a minimum of ¾ inch from the end of the board and 1 inch from the edge of the board.

Envision® boards are fastened to furring strips. The furring strips shall have dimensions of minimum 1 inch by 3 inches and secured to wood studs or masonry walls with the appropriate fasteners for the type of substrate to which they are being attached. Where installs are required to be acceptable for use in California Wildland Urban Interface Fire areas, furring strips shall have dimensions of minimum 2 inches by 4 inches. The furring strips shall be spaced at a maximum of 16 inches on center and attached such that the 3 or 4 inch face of the board is flat against the wall surface.

Envision® boards shall be fastened with 2 screws at every furring strip, with the fastener spacing as mentioned above. Butt joints of the Envision board shall be centered on furring strips and fastened with 2 screws at the end of each board. Two fasteners shall be located 1 inch from either edge of the board, and 1 fastener shall be located in the middle, at 2¾ inches from either edge. Butt joints shall also be staggered such that they do not all fall on one single furring strip. Butt joints shall not be located directly over or under a wall opening, such as a door or window.

Each course of Envision® boards shall be installed using spacers to allow a ⅛ inch – ⅜ inch gap between courses. Boards within each individual course shall be installed with a gap between ends spaced ⅛ inch for each 20°F increment of temperature between the temperature at installation and the maximum expected temperature during the summer, in the location of installation.

7. CONDITIONS OF USE

7.1 General:

The Envision® Composite Lumber boards 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** Materials and methods of installation shall comply with this report and the manufacturer's published installation instructions. In the event of a conflict between the installation instructions and this report, this report governs.
- 7.3** The Envision boards described in this report are permitted for use only in Type V-B construction as specified in 2018 and 2015 IBC Section 2605.2.
- 7.4** Compatibility of the supporting construction materials with all fasteners and other hardware components is subject to approval by the code official.
- 7.5** Only those types of fasteners and fastening methods described in this report have been evaluated for installation of Envision Composite Lumber boards; other methods of attachment are outside the scope of this report.
- 7.6** Envision® Composite Lumber boards are manufactured by TAMKO Building Products, Inc., located in Lamar, MO, under the UL LLC Listing/Classification and Follow-Up Service Program, which includes inspections in accordance with the quality elements of ICC-ES Acceptance Criteria for Quality Documentation, AC10.

8. SUPPORTING EVIDENCE

- 8.1** Manufacturer's description product literature, including installation instructions.
- 8.2** Data in accordance with ASTM D7032.
- 8.3** Data in accordance with ASTM E2707 and SFM Standard 12-7A-1.
- 8.4** Data in accordance with ICC-ES Acceptance Criteria for Quality Documentation (AC10), dated January 2018.

9. IDENTIFICATION

The Envision® Composite Lumber boards as described in this evaluation report are identified by a marking bearing the report holder's name (Envision Building Products, Inc.), the plant identification, the UL Listing/Classification Mark, and the evaluation report number UL ER25876-02. The validity of the evaluation report is contingent upon this identification appearing on the product or UL Listing/Classification Mark certificate.

10. USE OF UL EVALUATION REPORT

- 10.1** The approval of building products, materials or systems is under the responsibility of the applicable authorities having jurisdiction.
- 10.2** UL Evaluation Reports shall not be used in any manner that implies an endorsement of the product, material or system by UL.
- 10.3** The status of this report, as well as a complete directory of UL Evaluation Reports may be found at UL.com via the Product iQ database at www.UL.com/erdirectory.

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