



Code Compliance Research Report CCRR-0195

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DIVISION: 06 00 00 – WOOD, PLASTICS AND COMPOSITES

Section: 06 50 00 – Structural Plastics

Section: 06 53 00 – Plastic Decking

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REPORT SUBJECT:

Eovations™ Deck Boards

DecKorator® Vault Deck Boards

DecKorator® Frontier Deck Boards

SLS Composite Deck Boards

1.0 SCOPE OF EVALUATION

This research report addresses compliance with the following Codes:

- 2012 International Building Code (IBC)
- 2012 International Residential Code (IRC)

Eovations™ deck boards have been evaluated for the following properties:

- Structural Performance
- Durability
- Surface Burning

2.0 USES

2.1. *Eovations™*, *DecKorator®*, and *SLS Composite* deck boards are intended for use as a walking surface on exterior decks, balconies, porches, and walkways, including stairs as further defined herein.

3.0 DESCRIPTION

3.1. *Eovations™*, *DecKorator®*, and *SLS Composite* deck boards are thermoplastic composite deck boards, mono-extruded or co-extruded using proprietary inorganic fillers and polypropylene (PP) materials. Co-extruded deck boards have a polypropylene cap.

3.2. Finished deck boards are available in solid or slotted rectangular profiles.

3.2.1. *Eovations™* deck boards are mono-extruded, with nominal dimensions of 5.3" wide and 0.75" thick. See Figure 1.

3.2.2. *SLS Composite* deck boards are co-extruded, with nominal dimensions of 5.2" wide and 0.800" thick. See Figure 2.

3.2.3. *DecKorator® Vault* and *Frontier* deck boards are co-extruded, with nominal dimensions of 5.5" wide and 0.835" thick. See Figure 3.

3.3. Deck boards may be installed via face-fastening using exterior screws or by using hidden fastener systems.

4.0 PERFORMANCE CHARACTERISTICS

4.1. Deck boards are rated for a uniform live load of 100 lbs/ft.² when installed on support framing spaced at up to 16".

4.2. Deck boards used as stair treads are rated for the code-prescribed concentrated load equal to 300 lb when installed with a maximum 9" support span. Deck boards used as stair treads shall be installed in a minimum two-span condition.

4.3. Deck boards have wind uplift resistance ratings as determined by the fastening method. See Table 1.

4.4. Materials used have a flame spread index no greater than 200 when tested in accordance with ASTM E84.

4.5. Materials are deemed equivalent to preservative treated or naturally durable wood for resistance to weathering effects, attack from termites and fungus decay.

4.6. Structural performance has been demonstrated for a temperature range from -20°F to 125°F.

5.0 INSTALLATION

Installation shall be in accordance with the manufacturer's installation instructions and this report.

Where differences occur between this report and the manufacturer's installation instructions, this report shall govern.

5.1. Solid deck boards may be installed with #7 x 1-7/8" Camo™ hidden fasteners. Two fasteners are required at every joist.

5.2. Slotted deck boards are installed with the Equator® or Stowaway™ hidden fastener systems. One fastener is required at every joist. See Figures 4 and 5.

6.0 SUPPORTING EVIDENCE

6.1. Manufacturer's drawings and installation instructions.

6.2. Reports of testing and engineering analysis demonstrating compliance with ICC-ES AC174, Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails), revised February 2014, and ASTM D7032-10a.

6.3. Quality control manual in accordance with ICC-ES AC10, Acceptance Criteria for Quality Documentation, dated June 2014.

7.0 CONDITION OF USE

The deck board applications identified in this report are deemed to comply with the intent of the provisions of the referenced building codes subject to the following conditions:

7.1. The deck boards identified in this report are limited to exterior use in Type V-B (5B) construction, dwellings regulated by the IRC, and Types II-B and III-B construction where combustible construction is permitted in accordance with IBC Section 1406.3.

7.2. Boards placed at an angle other than 90 degrees to the supporting joist will require support framing at a reduced spacing such that the span of the board does not exceed 16".

7.3. The wind uplift resistance rating recognized in this report is based on attachment to treated Southern Pine framing (specific gravity, $G=0.55$). Installation on wood framing with a lesser specific gravity may result in a lower wind uplift rating.

7.4. Where required by the building official, engineering calculations and details shall be provided. The calculations shall verify that the anchorage complies with the building code for the type of framing and condition of the supporting construction.

7.5. Compatibility of the supporting construction materials with all metal fasteners are subject to approval by the code official.

7.6. Only those types of fasteners and fastening methods described in this report have been evaluated for the installation of the deck boards; other methods of attachment are outside the scope of this report.

7.7. *Eovations™*, *DeckKorator®*, and *SLS Composite* deck boards are manufactured in accordance with the manufacturer's approved quality control system with inspections by NTA (AA-682).

8.0 IDENTIFICATION

Eovations™, *DeckKorator®*, and *SLS Composite* deck boards produced in accordance with this report shall be identified with labeling on the individual deck boards that includes the following information: Name and/or trademark of manufacturer; the Code Compliance Research Report identification and number (CCRR-0195); and the following statement: "See Intertek CCRR-0195 at <https://whdirectory.intertek.com> for uses and performance levels."



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9.0 CODE COMPLIANCE RESEARCH REPORT

9.1. Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

9.2. Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

9.3. Reference to the Intertek website address: whdirectory.intertek.com is recommended to ascertain the current version and status of this report.

Table 1 - Fastener Description and Uplift Resistance Ratings

Generic Fastener Description	Uses	Detailed Fastener Description	Uplift Resistance
#7 x 1-7/8" Camo™ coated steel screw	Hidden fasteners for solid deck boards (see Section 5.1)	9 TPI with a 0.43 in length of reverse pitch, 1.85 in overall length, 0.162 in major dia., 0.197 in head dia., star drive trim head, pinch point	77 psf
Equator® Hidden Fastener (Figure 4)	Hidden Fastening system for slotted deck boards (see Section 5.2)	Polypropylene Clips 10 TPI with an 2 in overall length, 0.170 major dia., 0.242 in head dia., square drive trim head, type 17 point	44 psf
Stowaway™ Hidden Fastening System (Figure 5)	Hidden Fastening system for slotted deck boards (see Section 5.2)	Nylon Composite Clips fastened to joists with #7 by 1-5/8 in long stainless steel screw (0.164 in. major dia., 0.124 in shank dia., 0.235 in head dia.)	50 psf

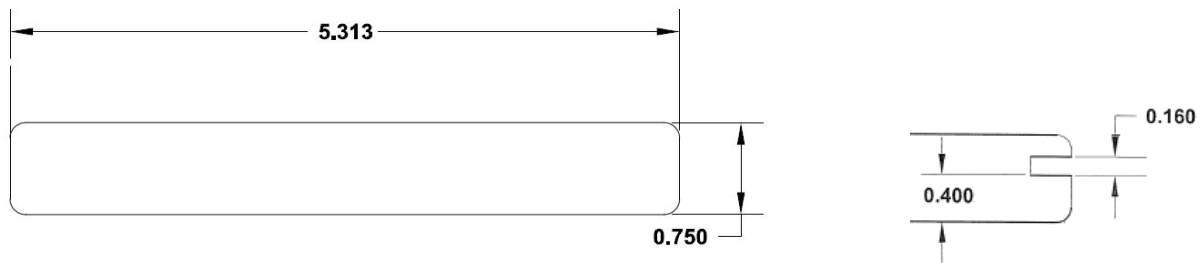


Figure 1 – Eovations™ Deck Board Profile

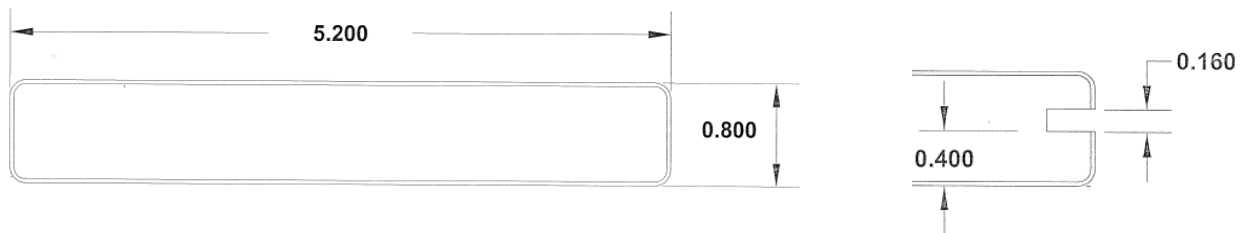


Figure 2 – SLS Composite Deck Board Profile

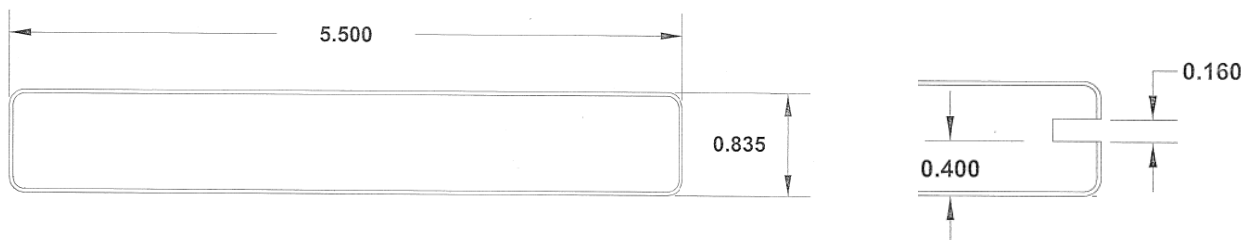


Figure 3 – DeckKorator® Vault and Frontier Deck Board Profiles

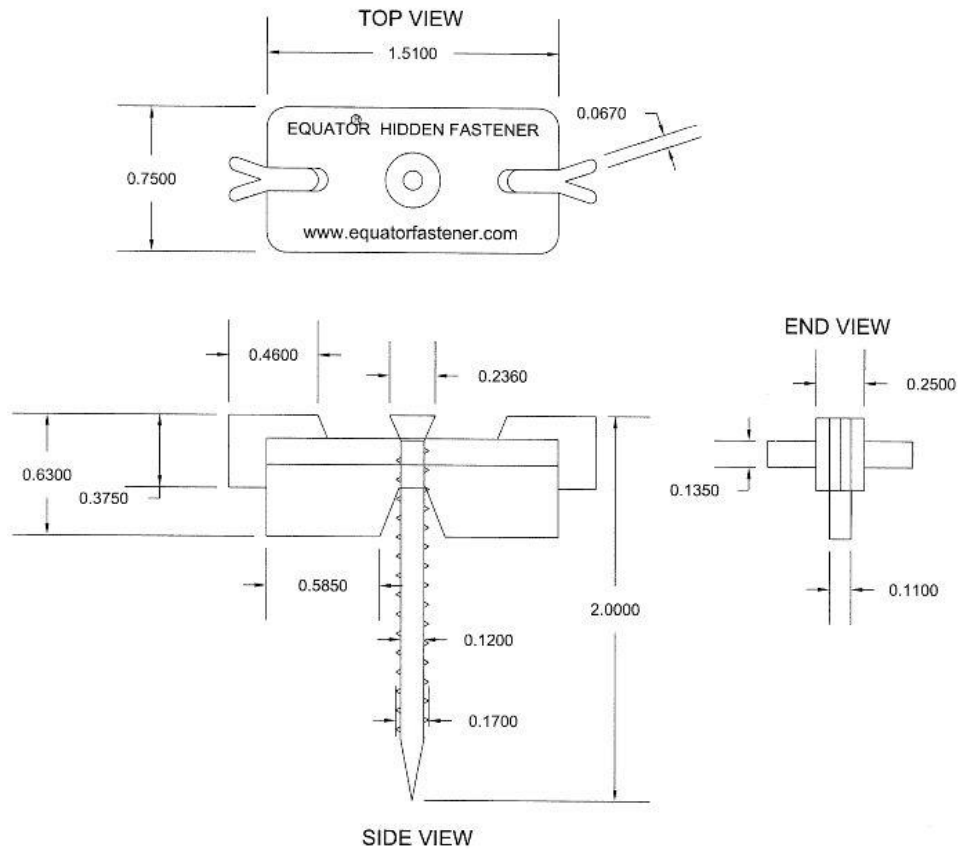


Figure 4 – Equator® Hidden Fastener System

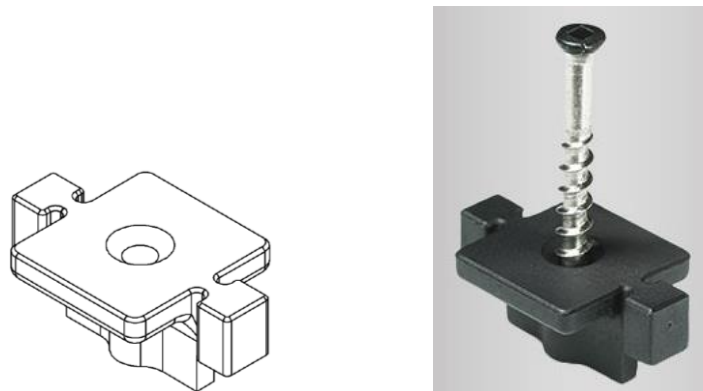


Figure 5 – Stowaway™ Hidden Fastener System