Code Compliance Research Report
CCRR-0144

Issue Date: 10-09-2009
Revision Date: 10-19-2026
Renewal Date: 10-31-2027

DIVISION: 06 00 00 - WOOD PLASTICS, AND COMPOSITES
Section: 06 50 00 - Structural Plastics
Section: 06 53 00 - Plastic Decking

REPORT HOLDER:
Eastern Metal Supply of North Carolina, LLC
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REPORT SUBJECT:
***Endeck®* Deck Boards**
***Endeck® Air* Deck Boards**

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2024, 2021, 2018 *International Building Code®* (IBC)
- 2024, 2021, 2018 *International Residential Code®* (IRC)

NOTE: This report references the most recent edition of the codes cited. Code sections in earlier editions of the codes may differ.

1.2 *Endeck®* and *Endeck® Air* have been evaluated for the following properties:

- Durability
- Surface Burning
- Decay Resistance
- Termite Resistance

1.3 *Endeck®* and *Endeck®* Air may be used in One- and Two-Family Dwellings regulated by the IRC and other construction types regulated by the IBC in accordance with IBC Section 705.2 *Projections*, where fire-resistance rated floor construction is not required for the deck or balcony.

2.0 STATEMENT OF COMPLIANCE

Endeck® and *Endeck® Air* deck boards comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.0.

2.1 2024 IBC and IRC Evaluation Reports

The Intertek CCRR is an *Evaluation Report* for approval of an alternate material, design, or method of construction in accordance with Section 104.2.3.6.1 of the 2024 IBC and Section R104.2.2.6.1 of the 2024 IRC.

3.0 DESCRIPTION

3.1 *Endeck®* deck boards are a solid rectangular cross-section with nominal dimensions of 1.0 inch thick by 5.5 inches wide and are produced with either a straight edge or grooved edge profile. See Figures 1 and 2.

3.2 *Endeck® Air* deck boards have a solid cross section with nominal rectangular dimensions of 0.88 inches thick by 5.38 inches wide and have a recessed-ribbed bottom surface. The Endeck® Air Deck boards are semi-capped (three sides). See Figure 3.

3.3 Walking Surface - *EnDeck®* and *Endeck® Air* deck boards have an embossed simulated wood-grain pattern surface.

3.4 *EnDeck® and Endeck®* Air deck boards are extrusions of cellular Polyvinyl Chloride (PVC).

3.5 *Endeck®* and *Endeck®* Air deck boards are available with either a (PVC) cap in the following colors: Ashwood, Beechwood, Olivewood and or Acrylic-Styrene-acrylonitrile (ASA) cap colors Dusk, Dawn, Slate, Chestnut, Sequoia, Cedar, Coastal Grey, Ashwood, Olivewood, and Beechwood.

4.0 PERFORMANCE CHARACTERISTICS

4.1 *EnDeck®* deck boards are rated for a uniform live load of 100 lb/ft^2 when installed on support framing spaced at 18 inches. This live load rating also applies to deck boards installed diagonal to the support framing (45° max) with a reduced on-center maximum joist spacing. See Section 6.2.

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 span of 10 inches. Deck boards used as stair treads shall be installed in a minimum two-span condition. Grooved deck boards may not be used as stair treads.

4.3 EnDeck® and Endeck® Air deck board wind uplift resistance ratings are detailed in Table 1. Uplift ratings are determined by fasteners installed on support framing spaced at 18 inches on-center.

4.4 Materials used in the deck board have a flame spread index less than 200 when tested in accordance with ASTM E84.

4.5 Materials used in the deck board 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

5.1 General:

Endeck® and *Endeck® Air* deck boards must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 Solid deck boards may be face-fastened and require two 2.5-inch-long FastenMaster Trim Top™ Stainless Steel Coated Trim screws or two 2.38-inch-long Camo stainless steel edge deck screws at each support. Minimum edge- and end-distances for fasteners are 1 inch.

5.3 Solid deck boards may be fastened using two #10 x 2.5-inch-long Starborn® Pro-Plug® concealed fasteners or Starborn HEADCOTE Cap-Tor® Stainless Steel Deck Screws at each support.

5.4 Solid deck boards may be fastened using TigerClaw TC-3S hidden fasteners. Two fasteners are required at each support. The outer edge of the first and last deck boards shall be fastened to each joist with one 2.5-inch-long FastenMaster Trim Top™ Stainless Steel Coated Trim Screw. See Figure 4.

5.5 Grooved deck boards may be fastened using TigerClaw TC-G hidden fasteners. Two fasteners are required at each support. The outer edge of the first and last deck boards shall be fastened to each joist with one 2.5-inch-long FastenMaster Trim Top™ Stainless Steel Coated Trim Screw. See Figure 5.

5.6 Solid deck boards may be fastened using HIDfast HF3 hidden fasteners. One fastener is required at each support. See Figure 6. The outer edge of the first and last deck boards shall be fastened to each joist with one #8-9 TPI, 0.12-inch dia., and 2.5-inch-long stainless-steel trim screw.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 Deck 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 deck board does not exceed 18 inches.

6.3 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.

6.4 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.

6.5 The Endeck® and Endeck® Air deck boards are manufactured under a quality control program with inspections by Intertek Testing Services.

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests in accordance with ASTM D7032-21 Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails).

7.2 Data in accordance with the ICC-ES Acceptance Criteria ICC-ES AC174, Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails), approved January 2025.

7.3 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

8.0 IDENTIFICATION

The EnDeck® and Endeck®Air deck boards are labeled with the product name, the Intertek Mark as shown below, the Code Compliance Research Report number (CCRR-0144), date code, time, and production line number. The packaging is identified with the manufacturer's name, the statement "See CCRR-0144 at https://bpdirectory.intertek.com for uses and performance levels.", and the statement "Meets Requirements of ASTM D7032."

9.0 OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 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.

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

10.3 Reference to the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

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TABLE - 1 UPLIFT RESISTANCE RATINGS

Decking Plank	Wind Uplift Resistance	Fastener	Stair Tread Span[1]	Span and Load Rating
Endeck Straight Edge	133 lb/ft^2	Fasten Master Trim Top Stainless Steel Coated Trim Screw	10 inches	Maximum Allowable Span = 18 inches Live Load = 100 lb/ft^2
		Starborn® Pro-Plug® concealed fasteners Starborn HEADCOTE Cap-Tor® Stainless Steel Deck Screws		
		HidFast HF3 Hidden Fastening System		
		Tiger Claw TC-3S Fastener		
		CAMO Fastening System		
Endeck Grooved Edge	120 lb/ft^2	Tiger Claw TCG Fastener	Not Permitted	
Endeck Air Straight Edge	116 lb/ft^2	HidFast HF3 Hidden Fastening System	10 inches	Maximum Allowable Span = 16 inches Live Load = 100 lb/ft^2
	150 lb/ft^2	CAMO Fastening System		

[1]Stair tread option is based on a minimum two-span application.

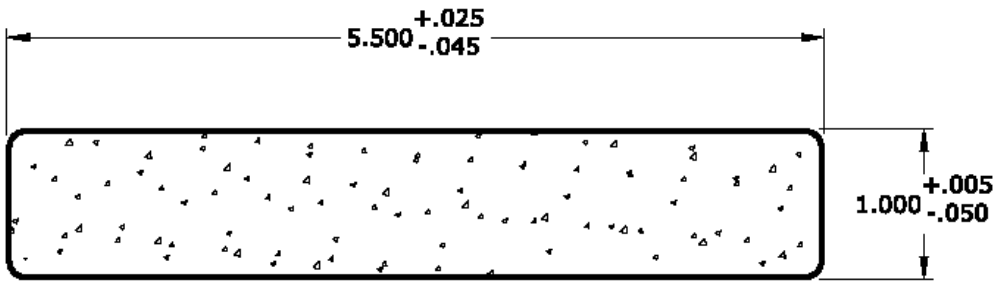

FIGURE 1 – ENDECK® STRAIGHT EDGE DECK BOARD

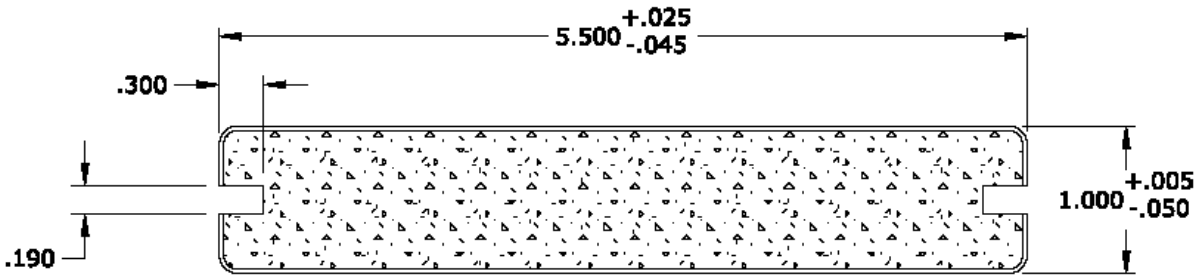

FIGURE 2 – ENDECK® GROOVED EDGE DECK BOARD

FIGURE 3 – ENDECK® AIR STRAIGHT EDGE DECK BOARD

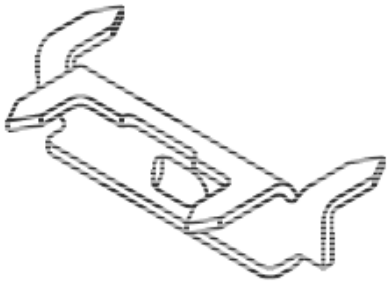

FIGURE 4 – TIGERCLAW TC-3S FASTENER

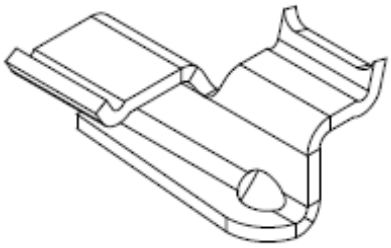

FIGURE 5 – TIGERCLAW TC-G FASTENER

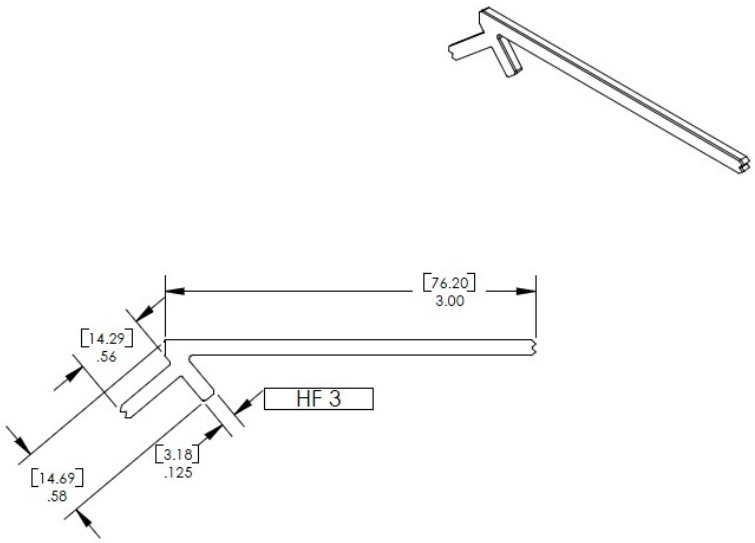

FIGURE 6 – HIDFAST FASTENER