



Code Compliance Research Report

CCRR-0137

Subject to Renewal: 01/20/2011
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1.0 Subject

VEKAdeck™ Decking Planks

2.0 Research Scope

2.1. Building Codes:

2006 International Building Code (IBC)
2009 International Building Code (IBC)
2006 International Residential Code (IRC)
2009 International Residential Code (IRC)

2.2. Properties:

Structural Performance
Durability
Surface Burning
Decay Resistance
Termite Resistance

3.0 Description

3.1. General – VEKAdeck™ deck boards are intended for use as a walking surface on exterior decks, balconies, porches, and walkways, including stairs.

3.2. Materials and Processes - VEKAdeck™ deck boards are co-extruded and consist of a common composite material of glass-filled cellular Polyvinyl Chloride (PVC) with a PVC capstock in the following colors; Khaki, Almond, Gray, White, Mocha and Walnut.

3.3. Profiles - VEKAdeck™ deck boards have a solid cross-section with nominal dimensions of 1 inch thick by 5-1/2 inches wide. See Figure 1.

3.4. Walking Surface - VEKAdeck™ deck boards use an embossed simulated wood-grain pattern surface.

4.0 Performance Characteristics

4.1. VEKAdeck™ deck boards are rated for a uniform live load of 100 lb/ft.² when installed on support framing spaced at 16 inches.

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 12 inches. Deck boards used as stair treads shall be installed in a minimum two-span condition.

4.3. VEKAdeck™ deck boards have a wind uplift resistance rating based on the fastening system used as identified in Table 1 when installed on support framing spaced 16 inches.

4.4. Materials used have a flame spread index of 30 when tested in accordance with ASTM E 84.

4.5. Materials used 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. Deck board attachment may be made by the methods identified in Table 1.

5.2. 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 16 inches.

6.0 Supporting Evidence

6.1. Manufacturer's drawings and installation instructions.

6.2. Reports of testing demonstrating compliance with ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails), AC174 effective June 1, 2009.

6.3. Quality control manual in accordance with ICC-ES Acceptance Criteria for Quality Documentation, AC10, approved March 2009.

7.0 Conditions of Use

The *VEKAdeck*™ Decking Plank 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. *VEKAdeck*™ Decking Planks identified in this report are limited to use in Type V-B (5B) construction.

7.2. 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.

7.3. 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.

7.4. Compatibility of the supporting construction materials with all fasteners, metal post mount components and other hardware components is subject to approval by the code official.

7.5. All products are manufactured in Fombell, Pennsylvania by VEKA Inc., in accordance with the manufacturer's approved quality control system with inspections by Architectural Testing, Inc (AA-676).

8.0 Identification

VEKAdeck™ deck boards produced in accordance with this report shall be identified with labeling on the individual deck boards that includes the following information:

8.1. Name and/or trademark of the manufacturer and the manufacturers address.

8.2. The mark of the independent inspection agency, Architectural Testing, Inc. (AA-676)

8.3. The ATI Code Compliance Research Report Number (CCRR-0137)

9.0 Code Compliance Research Report Use

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 or manufacturer by ATI.

9.3. Reference to the Architectural Testing internet web site address at www.archtest.com is recommended to ascertain the current version and status of this report.

Table 1

<u>Fastener</u>	<u>Attachment</u>	<u>Wind Uplift</u>
Face Fastened	Two (2) #8 x 2-1/2 inch deck screws at each supporting joist. Minimum edge and end distance for fasteners is 1 inch from both the edge and the end of each board	318 lb/ft. ²
Tiger Claw [®] TC-3S	One (1) #10 x 2 inch stainless steel bugle head screw. One (1) clip per joist. Outboard edges are attached using one (1) #8 x 2-1/2 inch deck screws at each joist.	200 lb/ft. ²
Grabber [®] Deckmaster [®]	Brackets fastened to joists every 3-1/2 inches using #8 x 1 inch pan head screws. (Brackets are placed on alternating sides of the joists. See Figure 4.) VEKAdeck [™] is then fastened to the brackets every 2-1/4 inches using #12 x 1 inch flat head screws.	194 lb/ft. ²

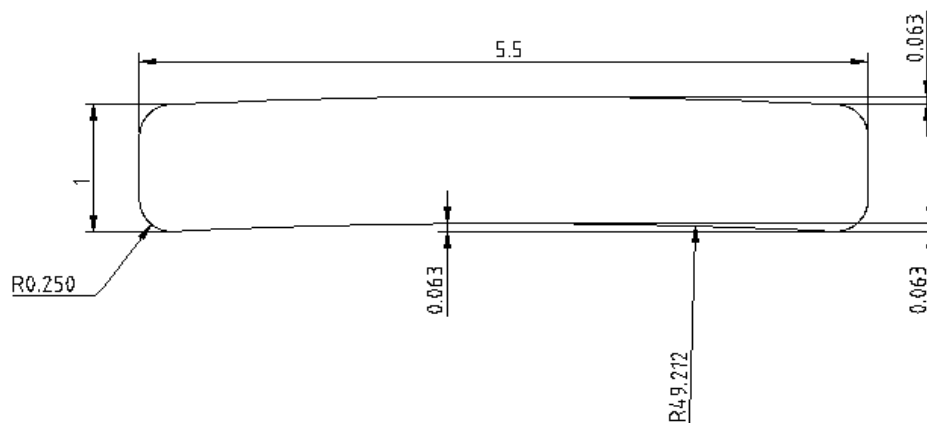


Figure 1 – VEKAdeck[™] Dimensions

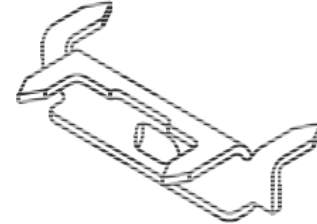
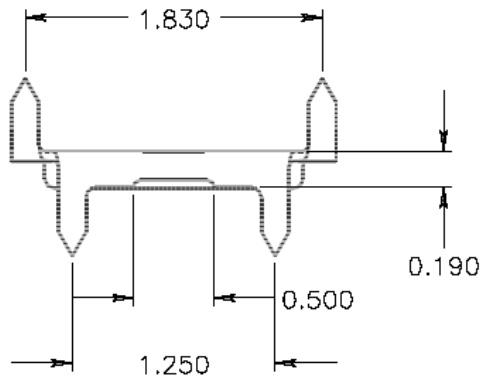


Figure 2 – Tiger Claw® TC-3S

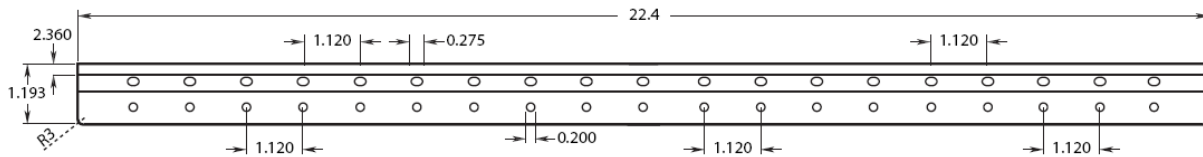


Figure 3 – Grabber® Deckmaster®

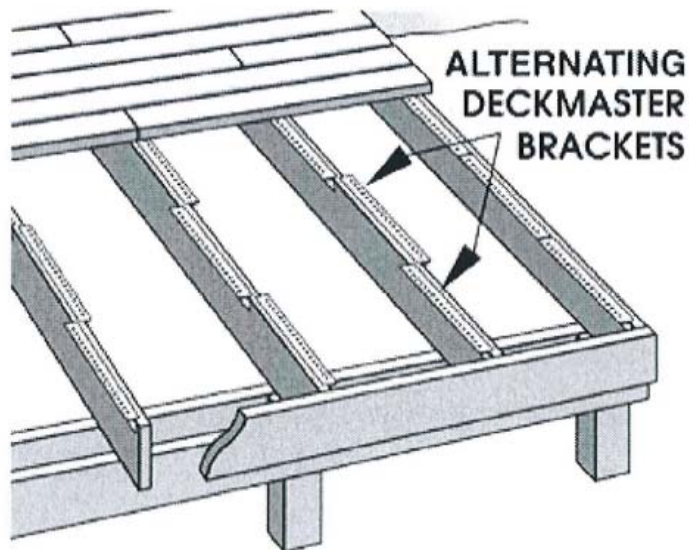


Figure 4 - Grabber® Deckmaster® Installation