



Code Compliance Research Report

CCRR-0160

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1.0 Subject

*DuraLife™ Siesta™ Collection – Solid,
Grooved, and Starter*

DuraLife™ Dock Collection

*DuraLife™ Porch Collection – Porch Board
and Stair Tread*

2.0 Research Scope

2.1. Building Codes:

2012 International Building Code (IBC)

2012 International Residential Code (IRC)

2.2. Properties:

Structural Performance

Durability

Surface Burning

Decay Resistance

Termite Resistance

3.0 Description

3.1. General – *DuraLife™* boards are intended for use as a walking surface on exterior decks, balconies, porches, and walkways, including stairs as described further herein.

3.2. Materials and Processes

3.2.1. *DuraLife™ Siesta™ Collection* boards and *DuraLife™ Dock Collection* boards are a co-extruded composite material comprised of wood fiber and polypropylene with a polypropylene capstock in the following colors: Cedar, Coastal Gray, Green, Mahogany, Merlot, Pebble, and Sage. *DuraLife™ Siesta™ Collection* boards are capped on three surfaces (bottom surface is not capped). All surfaces of the *DuraLife™ Dock Collection* boards are capped.

3.2.2. *DuraLife™ Porch Collection* boards are a mono-extruded composite material comprised of wood fiber and polypropylene in the following color: Natural Gray.

3.3. Six profiles are produced:

3.3.1. *DuraLife™ Siesta™ Collection* boards are 0.91 inch thick with an overall width of 5.50 inches and are produced in three profiles:

3.3.1.1. *Solid* – solid cross-section with 0.25 radius edges. See Figure 1.

3.3.1.2. *Grooved* – solid cross-section with 0.25 radius edges with a slot extruded in each of the longitudinal edges to accept hidden fasteners. See Figure 2.

3.3.1.3. *Starter* – one side of the *Starter* board's width has a cross-section like the *Solid* board, and the other side of the *Starter* board's width has a cross-section like the *Grooved* board. See Figure 3.

3.3.2. *DuraLife™ Dock Collection* boards are a solid cross-section with dimensions of 1.125 inches thick by 5.50 inches wide with 0.125 inch radius edges. See Figure 4.

3.3.3. *DuraLife™ Porch Collection* boards are produced in two profiles:

3.3.3.1. *Porch Board* – 0.86 inch thick by 3 inches wide cross-section with tongue and groove opposing edges. See Figure 5.

3.3.3.2. *Stair Tread* – 1.125 inches thick by 5.50 inches wide cross-section. See Figure 6.

3.4. Walking Surface – All *DuraLife™* boards use an embossed simulated wood-grain pattern on the walking surface.

4.0 Performance Characteristics

4.1. All *DuraLife™* products described herein, except *DuraLife™ Porch Collection – Stair Tread* boards, are rated for a uniform live load of 100 lb/ft² when installed on support framing spaced as shown in Table 1.

4.1.1. *DuraLife™ Porch Collection – Stair Tread* boards are limited to use as stair treads on exterior decks and porches.

4.2. *DuraLife™ Siesta™ Collection – Solid* boards and *DuraLife™ Porch Collection – Stair Tread* boards may be used as stair treads when installed in a minimum two-span condition and are rated for the code-prescribed concentrated load equal to 300 lb when installed with a maximum span as shown in Table 1.

4.3. *DuraLife*™ boards have wind uplift resistance ratings as determined by the fastening method. See Table 2.

4.4. *DuraLife*™ boards have a flame spread index less than 200 when tested in accordance with ASTM E 84 as required by ICC-ES AC174 and ASTM D 7032.

4.5. Materials used are deemed equivalent to preservative treated or naturally durable wood for resistance to weathering effects, attack from non-Formosan 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. All *DuraLife*™ boards, except *DuraLife*™ *Porch Collection – Porch Board*, are face-fastened with two #8 x 2-1/2 inch long stainless steel screws at each support. Minimum edge distance for fasteners is 0.75 inch from the board edge, and minimum end distance for fasteners is 1.0 inch from the end of each board. Screw installation requires a 1/8 inch pre-drilled pilot hole. See Table 2 and Table 3.

5.2. *DuraLife*™ *Porch Collection – Porch Board* are fastened with a single #7 x 2-1/4 inch long stainless steel screw at each joist. Screw installation requires a 1/8 inch pre-drilled pilot hole at a 45° angle through the tongue. See Table 2 and Table 3.

5.3. Grooved boards are fastened using *Fastenator*® hidden fastener clips. *Fastenator*® clips utilize a single #7 x 2-1/4 inch long stainless steel screw supplied pre-installed with the polypropylene clip. Each board requires two hidden fastener clips at each support so that both edges of each board are secured. See Table 2 and Table 3.

5.3.1. Face-fastening is required where the *Fastenator*® clips cannot be installed or where the clip does not engage both sides of the board. Where face-fastening is required, a screw as described in Section 5.1 is used for installation.

6.0 Supporting Evidence

6.1. Manufacturer's drawings and installation instructions.

6.2. Reports of testing demonstrating compliance with ICC-ES AC174, Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails), approved January 2012.

6.3. The reports of testing and engineering analysis demonstrating compliance with ASTM D 7032-08.

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

7.0 Conditions of Use

The *DuraLife*™ 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 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 1406.3 as follows:

Construction Type IIB, IIIB & VB per IBC §1406.3 and Table 601 (No fire resistance rating required for floors)

Construction Type IIIA, IV & VA per IBC §1406.3, Exception 3 (Sprinkler protection required)

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 16.0 inches for *Siesta*™ *Collection* boards and *Porch Collection – Tongue and Groove* boards and 24.0 inches for *Dock Collection* boards.

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 fasteners is subject to approval by the code official.

7.6. *DuraLife™* deck boards recognized in this report have not been evaluated for use in areas subject to Formosan termite attack.

7.7. All products are manufactured in Biddeford, Maine by Integrity Composites in accordance with the manufacturer's approved quality control system with inspections by Architectural Testing (IAS AA-676).

8.0 Identification

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 manufacturer;

8.2. The Architectural Testing Code Compliance Research Report mark and number (CCRR-0160); and

8.3. The following statement: "ASTM D 7032 compliant. See CCRR-0160 at www.ati-es.com for uses and performance levels."

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 Architectural Testing.

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 – Span / Load Rating and Stair Tread Support Spacing

<i>DuraLife™</i> Board	Span / Load Rating Inches / (lb/ft ²)	Stair Tread Support Spacing ¹ (in)
<i>Siesta™ Collection – Solid</i>	16 / 100	12.0
<i>Siesta™ Collection – Grooved</i>		not rated
<i>Siesta™ Collection – Starter</i>		
<i>Dock Collection</i>	24 / 100	
<i>Porch Collection – Porch Board</i>	16 / 100	
<i>Porch Collection – Stair Tread</i>	not rated	16.0

¹ Two-span installation

Table 2 – Uplift Resistance Rating

DuraLife™ Board	Support Spacing (in)	Uplift Resistance Rating (lb/ft²)	
		Direct Fastening Method ¹	Fastenator® Hidden Fastener System ¹
<i>Siesta™ Collection – Solid</i>	16.0	437	not rated
<i>Siesta™ Collection – Grooved</i>		not rated	81
<i>Siesta™ Collection – Starter</i>		81	
<i>Dock Collection</i>	24.0	258	not rated
<i>Porch Collection – Porch Board</i>	16.0	134	not rated
<i>Porch Collection – Stair Tread</i>		387	not rated

¹ As described in Table 3 below

Table 3 – Fastener Description

Generic Fastener Description	Uses	Detailed Fastener Description
#8 x 2-1/2 inch long stainless steel screw	Face fastening (see Section 5.1)	#8 x 2-1/2 inch long, 0.181 inch major diameter, 0.131 inch shank diameter, trim head with 0.255 inch head diameter, Type 17 point, stainless steel screw
#7 x 2-1/4 inch long stainless steel screw	Face fastening; with <i>Fastenator®</i> Clips (see Sections 5.2 & 5.3)	#7 x 2-1/4 inch long, 0.17 inch major diameter, 0.123 inch shank diameter, trim head with 0.23 inch head diameter, Type 17 point, stainless steel screw

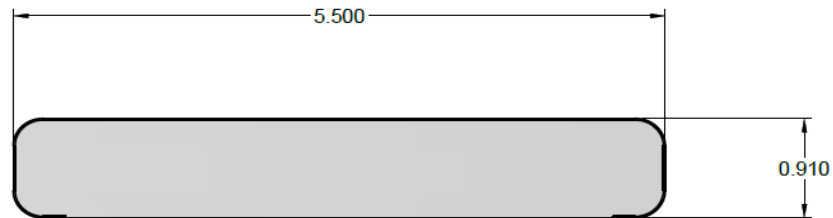


Figure 1 - DuraLife™ Siesta™ Collection - Solid Board

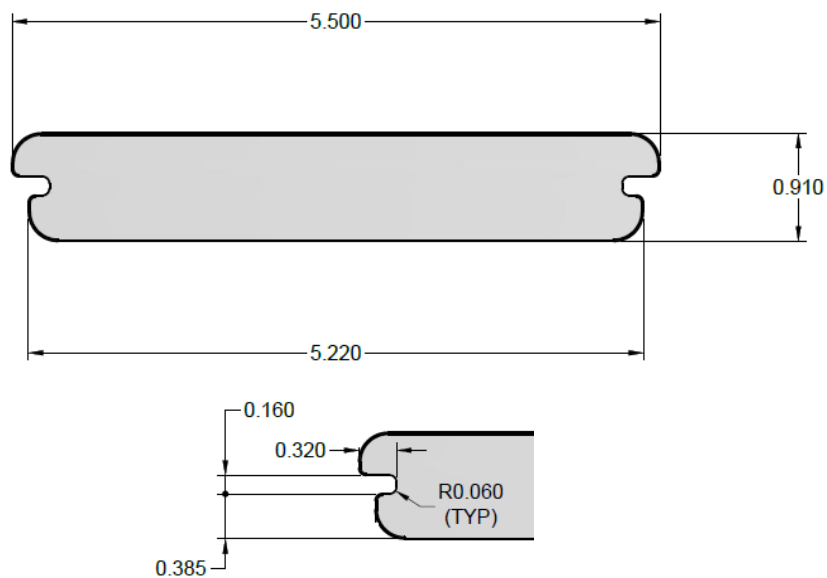


Figure 2 - DuraLife™ Siesta™ Collection – Grooved Board

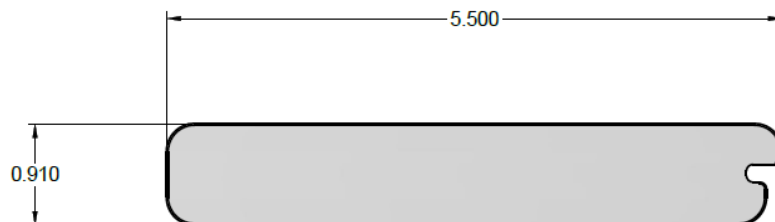


Figure 3 - DuraLife™ Siesta™ Collection – Starter Board

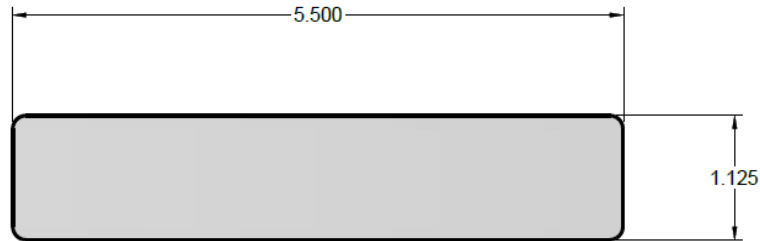


Figure 4 - DuraLife™ Dock Collection Board

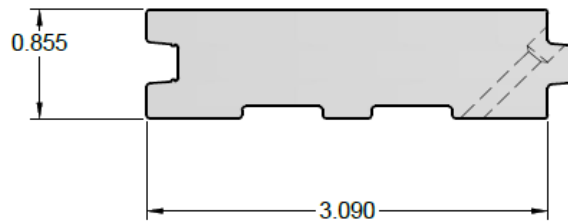


Figure 5 - DuraLife™ Porch Collection – Porch Board

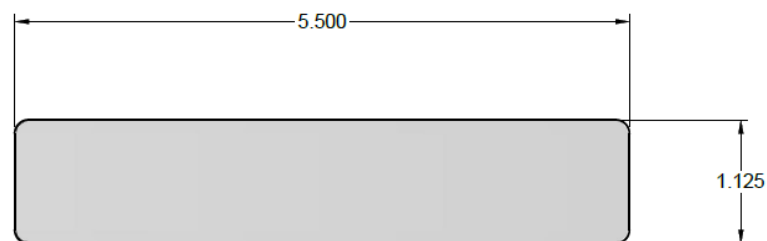


Figure 6 - DuraLife™ Porch Collection – Stair Tread Board

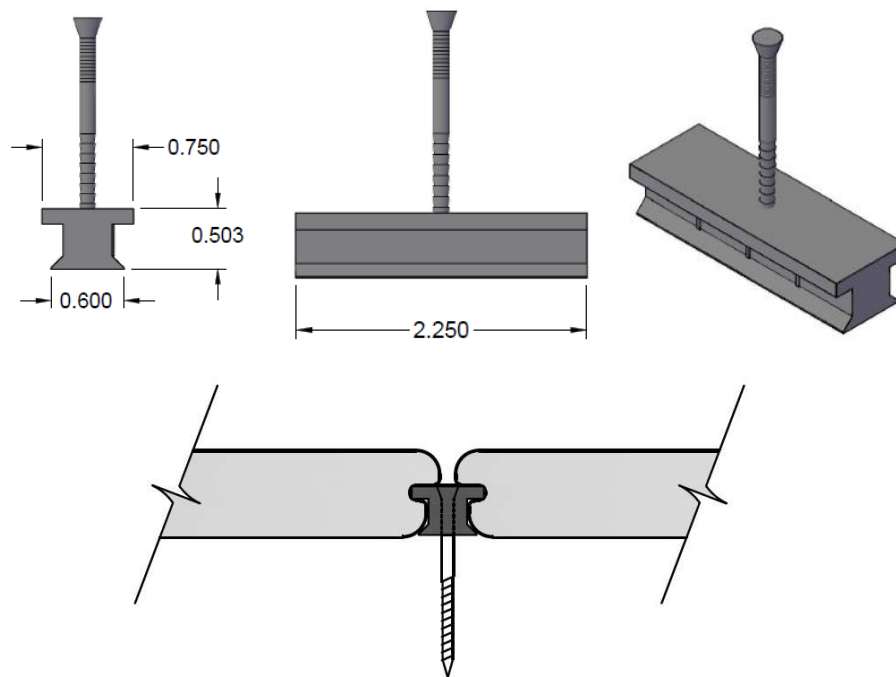


Figure 7 - Fastenator® Hidden Fastener System