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1.0 Subject

NyloDeck™ Deck Boards

NyloPorch™ Porch Boards

2.0 Research Scope

2.1. Building Codes:

2012 International Building Code (IBC)

2012 International Residential Code (IRC)

2010 Florida Building Code (FBC)
Excluding High Velocity Hurricane Zones (HVHZ)

2.2. Properties:

Structural Performance

Durability

Surface Burning

3.0 Description

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

3.2. Materials and Processes – *NyloDeck™* and *NyloPorch™* are composite deck and porch boards manufactured of recycled carpet fibers and proprietary resins.

3.2.1. *NyloDeck™* has solid rectangular cross-sections with nominal dimensions of 15/16" thick by 5-1/2" wide. Top side edges are rounded with a 9/32" radius. See Figure 1.

3.2.2. *NyloPorch™* boards have a tongue and groove rectangular cross-sections with nominal dimensions of 15/16" thick, and 3-1/8" or 5-1/8" face width. Side and tongue edges are beveled. See Figure 2.

3.3. Walking Surface - *NyloDeck™* and *NyloPorch™* boards are finished with an embossed simulated wood-grain pattern provided in six colors: Coastal Mist, Harbor Gray, Desert Spice, Mountain Mocha, Saddle Rose, and Newport White.

4.0 Performance Characteristics

4.1. Uniform live load ratings are given in Table 1 for the corresponding decking, fasteners, and support spans. Boards installed diagonal to support framing (45° max.) are limited to a load rating of 100 psf at a maximum joist span of 16" on center.

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 support span indicated in Table 1. Deck boards used as stair treads shall be installed in a minimum two-span condition.

4.3. *NyloDeck™* and *NyloPorch™* boards are rated for wind uplift resistance with fastening systems as described in Table 1.

4.4. Materials used have a flame spread index of 95 when tested according to ASTM E84-11a. The referenced criteria of AC174, requires a flame spread index not exceeding 200 when tested according to 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. *NyloDeck™* and *NyloPorch™* boards are fastened with the fastening systems as described in Table 1.

5.1.1. Face-fastening is required where hidden fasteners cannot be installed or where the hidden fastener does not engage both sides of the board.

5.1.2. *NyloDeck™* and *NyloPorch™* boards may be installed diagonal to support framing up to a maximum of 45° with 16" o.c. maximum joist spacing.

6.0 Supporting Evidence

6.1. Manufacturer's drawings and installation instructions.

6.2. Reports of testing in accordance 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 the performance requirements of ASTM D 7032-08, Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails).

6.4. Within the scope of this report, the following versions of referenced standards are deemed equivalent.

Standard	Version (s)	
ASTM D7032	08	07
ASTM E84	11a	07, 09

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

7.0 Conditions of Use

The *NyloDeck™* and *NyloPorch™* 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 exterior use in Type V-B (5B) construction in the IBC, FBC and dwellings regulated by the IRC.

7.2. 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".

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 *NyloDeck™* and *NyloPorch™* boards; other methods of attachment are outside the scope of this report.

7.7. *NyloDeck™* and *NyloPorch™* are manufactured in Covington, Georgia by Nyloboard, LLC, in accordance with the manufacturer's approved quality control system with inspections by Architectural Testing (IAS AA-676).

8.0 Identification

NyloDeck™ and *NyloPorch™* 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. *NyloDeck™* board performance levels; 24" allowable span, 24/100 or 16/200 span rating, and 12" stair tread span;

8.3. *NyloPorch™* board performance levels; 24" allowable span, 24/100 or 16/100 span rating, and 12" stair tread span;

8.4. The Architectural Testing Code Compliance Research Report mark and number (CCRR-0183).

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 by Architectural Testing.

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

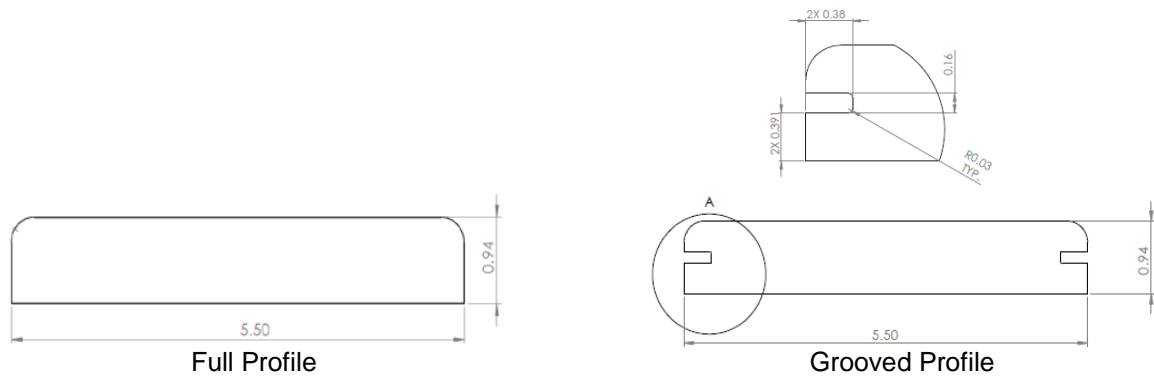
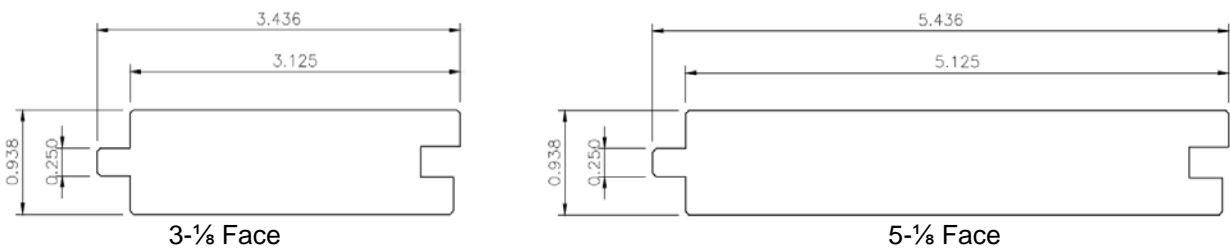
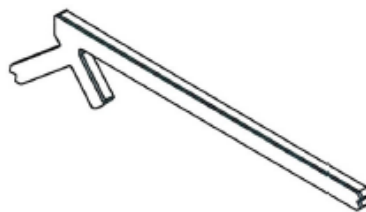
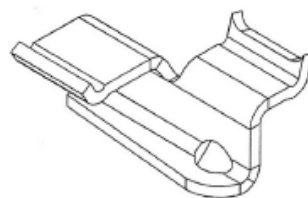
Table 1 – Span and Wind Uplift Ratings

Deck Board Description	Span / Load Rating	Stair Tread Span ⁽¹⁾	Fastener System	Fastener Description	Wind Uplift Rating ⁽²⁾
<i>NyloDeck™</i> (Full Profile)	16" / 200 lb/ft ² 24" / 100 lb/ft ²	12"	GripRite PrimeGuard Plus Composite Deck Screws	#9 (0.1875" shank diameter) x 2-½" <i>GripRite PrimeGuard Plus</i> composite deck screws for framing spaced up to 24" on center	450 lb/ft ² 24" span
			GripRite PrimeGuard Plus Composite Deck Screws	#9 (0.1875" shank diameter) x 2-½" <i>GripRite PrimeGuard Plus</i> composite deck screws to support framing spaced up to 16" on center	691 lb/ft ² 16" span
			<i>CAMO Marksman Pro</i> Hidden Deck Fastening System	#7 (0.162" major diameter) x 7-⅞" Carbon Steel Screws for framing spaced up to 24" on center	88 lb/ft ² 24" span
			<i>HIDFast</i> Hidden Deck Fastener	One 2.5" pneumatic fastener per joist for framing spaced up to 24" on center ⁽²⁾	52 lb/ft ² 24" span
<i>NyloDeck™</i> (Grooved)	16" / 200 lb/ft ² 24" / 100 lb/ft ²	Not Permitted ⁽³⁾	<i>Tiger Claw TC-G</i> Hidden Deck Fastener	#8 (0.120" shank diameter) x 1-⅝" Stainless Steel Screws for framing spaced up to 24" on center	125 lb/ft ² 24" span
			<i>Grabber Deckmaster G5</i> Deck Clip	#8 (0.124" shank diameter) x 1-¾" Coated Carbon Steel Screws for framing spaced up to 24" on center	105 lb/ft ² 24" span
<i>NyloPorch™</i>	24" / 100 lb/ft ² 16" / 100 lb/ft ²	12"	<i>Grabber</i> Trim Head wood screw	#7 (0.110" shank diameter) x 2-1/4" stainless steel screws	85 psf 24" span
			<i>Primatech</i> "L" Nail	2" long, 16 gauge, stainless steel nail installed with pneumatic flooring nailer at 45° angle	31 psf 24" span

⁽¹⁾ Stair tread span is based on a continuous deck board over two or more equal spans (3 supports).

⁽²⁾ Wind uplift ratings are based on two fasteners at each support (wood joist). The *HIDFast*, *Tiger Claw*, and *Grabber Deckmaster* fastener systems are attached to each support so that both edges of each board are secured. Values have been adjusted for wind load duration and end use.

⁽³⁾ *NyloDeck™* installed using hidden fasteners are not permitted for use as stair tread.


Figure 1 – NyloDeck™ Profiles

Figure 2 – NyloPorch™ Profiles

Figure 3 – HIDFast Hidden Deck Fastener System

Figure 4 – Tiger Claw TC-G Hidden Deck Fastener System

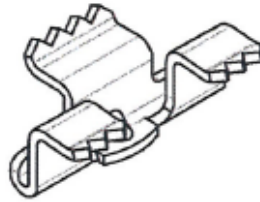


Figure 5 – Grabber Deckmaster G5 Deck Clip System

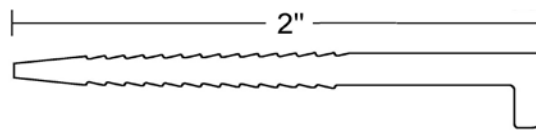


Figure 6 – Primatech 2" L Nail