



Building Product Evaluation Report 0110

MoistureShield Deck Boards and Stair Treads

MoistureShield, Inc.

Initial Acceptance: June 19, 2017

Expiration: June 18, 2024

Revision: June 17, 2022

TYPE OF ACCEPTANCE

Product Material – Wood and Plastics

CSI Specification Division: 06 50 00 (Structural Plastic) and 06 53 00 (Plastic Decking)

MANUFACTURER IDENTIFICATION:

MoistureShield, Inc

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Springdale, AR 72764
1-479-756-7400

www.moistureshield.com

EVALUATION REPORT SUBJECT:

Deck Boards and Stair Treads for Exterior Applications

Installation on construction complying with the International Residential Code® (IRC®) or with the International Building Code® (IBC®).

DESCRIPTION OF BUILDING COMPONENTS:

A. Deck Boards

MoistureShield, Inc., deck boards are wood thermoplastic composite lumber product consisting of plastic, wood filler plus additives and color. The product specifications are listed in the approved quality control manual. MoistureShield, Inc., deck board components are manufactured in several colors by the mono-extrusion process (under series name **Vision**, **Vantage**, **Vue**, **ModernView**, and **LifeCycle**) or the co-extrusion process with capping covering three sides of the deck board (under series name **Elevate** and **Meridian**).

- 1. Deck Boards:** Mono-extrusion production method. See attached drawings in **Table 1.A.1**
- 2. Deck Boards:** Co-extrusion production method. See attached drawings in **Table 1.A.1**
- MoistureShield, Inc., deck boards can be used as stair treads. When deck boards are used as stair treads, they must be installed perpendicular to the supporting framing. Deck boards and stair treads must be installed over at least two spans. The decking and stair treads must be installed with a minimum gap of 3/16 inch between parallel boards for drainage and decking must be installed with a minimum clearance of 1/8 inch at each end of the board. See manufacturer's installation instructions noted item 4 below.
- For additional decking installation details see manufacturer's published installation instructions at <https://www.moistureshield.com/support/installation-instructions/>

APPLICABLE CODES:

- 2015, 2018, and 2021 International Building Code® (IBC®)
- 2015, 2018, and 2021 International Residential Code® (IRC®)



APPLICABLE CHARACTERISTICS REVIEWED:

B. Deck Board(s) – See Table 1 below for a list of the descriptions of the deck boards reviewed.

1. Deck Board: Structural Performance

- (a) The deck boards have been reviewed for uniform load, maximum span and deck board direction when installed on support framing members. See attached Table 1.
- (b) The deck boards have been reviewed for wind uplift resistance and have an uplift load rating when installed as indicated in Table 1 in this Report.
- (c) The deck boards used as stair treads meet the code-prescribed load requirements including the concentrated load of 300 lbf when installed in accordance with the manufacturer's installation instructions and Table 1 in this Report.
- (d) Review of the structural design for code compliance of supporting members has not been evaluated and is not a part of this Report.

2. Deck Board: Fastening

- (a) The deck boards must be fastened to the structural support members in accordance with the manufacturer's installation instructions and Table 1 of this Report. When manufacturer's installation instructions differ from this Report, this Report governs.
- (b) When deck boards are used as stair treads, they must be installed in accordance with the manufacturer's installation instructions and Table 1 in this Report. When the manufacturer's installation instructions differ from this Report, this Report governs.

3. Deck Board Durability: Temperature

- (a) The deck boards have been reviewed for the temperature range of -20 to 125 °F (-29 to 52 °C).

4. Deck Board Flame Spread Index:

- (a) The flame spread rating for the deck boards described in this Report was less than 200 when tested with ASTM E84 *Standard Test Method for Surface Burning Characteristics of Building Materials*.

5. Deck Board Decay Resistance:

- (a) The deck boards reviewed for this Report have been deemed comparable to naturally durable wood for resistance to fungal decay.

6. Deck Board Termite Resistance:

- (a) The deck boards reviewed for this Report have been deemed comparable to preservative-treated wood for resistance to termite attack.

7. UV Testing:

- (a) The UV testing was conducted, and an appropriate adjustment factor was applied, in accordance with ASTM D7032 *Standard for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails)*.

APPLICABLE USES:

MoistureShield, Inc., deck boards evaluated in this Report are limited to exterior applications for balconies, porches, stair treads, walking surfaces and decks.

LIMITATIONS OF ACCEPTANCE:

MoistureShield, Inc., deck boards described in this Report comply with those codes listed in the Applicable Codes section above and are subject to the following conditions:

- 1. The deck board products must be limited to Type V-B (IBC) and residential construction in accordance with the IRC for exterior use as deck boards for balconies, porches, decks and stair treads.



2. Installation of the deck boards must comply with this Report, the manufacturer's published installation instructions (see section A-4 above), and the applicable codes. When deck board manufacturer's installation instructions differ from this Report, this Report governs.
3. The fasteners described in this Report have been evaluated for the installation of the MoistureShield, Inc., deck boards only. Compatibility of the fasteners to the treated supporting construction has not been evaluated.
4. MoistureShield, Inc., deck boards indicated in this Report must be fastened to the supporting construction as indicated in the manufacturer's installation manual and as outlined in this Report. When deck board manufacturer's fastening instructions differ from this Report, this Report governs.
5. When required, the structural deck board layout must be designed by a professional and submitted to the authority having jurisdiction for final acceptance.
6. MoistureShield, Inc., deck boards have not been evaluated as a member of a fire-resistance-rated assembly.
7. MoistureShield, Inc., has a third-party inspection program provided by PFS TECO.

DOCUMENTATION SUBMITTED:

Submitted data was provided in accordance with PFS TECO Certification and Inspection Policy: Deck Boards and Guardrails (Quality control manual, Specifications, Manufacturer's installation instructions, Test data and Descriptive information). The products have been evaluated in accordance with ICC-ES AC174, *Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails)*.

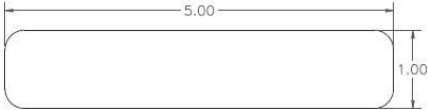
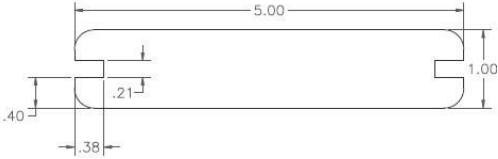
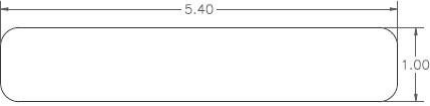
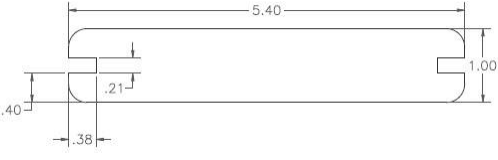
PRODUCT IDENTIFICATION:

MoistureShield, Inc., deck boards evaluated in this Report must be identified with a label, stamp, or laser imprint on every deck board, or their packaging. The information that is required is as follows: MoistureShield, Inc., product identification, compliance to ASTM D7032 including the maximum deck board span (inches on center spacing of supports) and loading (psf), the PFS TECO Building Product Evaluation Report number (BPER 0110), and PFS Certification Mark for use in the United States (see image below). Deck boards without this information are not covered under this Report.

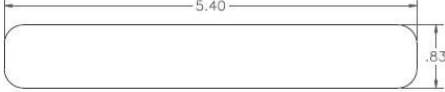
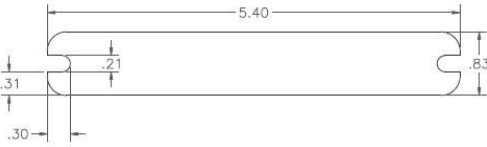
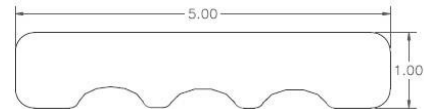
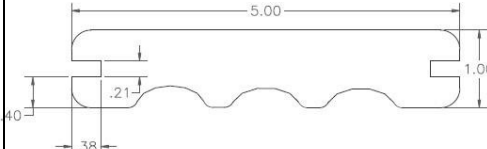
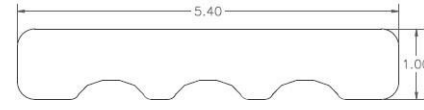
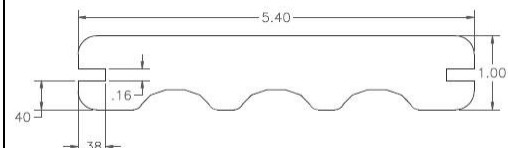




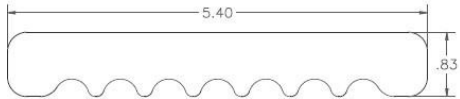
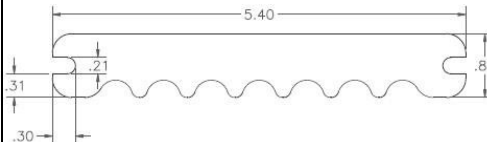
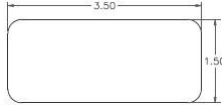
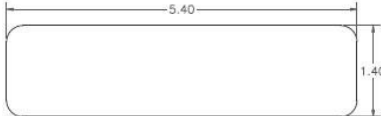
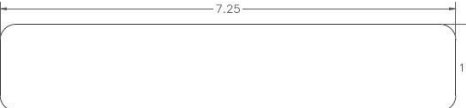
Table 1: Span Table and Fastening Schedule for Deck Boards

A.1 Deck Boards: Mono-extrusion Production Method - Vision, Vantage, Vue, ModernView, and LifeCycle								
Nominal Size and Trade Name	Shape	Edge Type	Deck Board Profile	Maximum Span Rating (in) for Allowable Load (psf)			Fastening Schedule¹ and Uplift Values	Maximum Stair Tread Span (in)
				100	150	200		
1x5 Generic	Solid Profile with Radius Corners	Solid		16	12	10	114 lbf per #7x2-1/4" SS Deck Screw	9
		Grooved		16	12	10	100 psf with MoistureShield Deck Clip or Aegis Clip hidden fastening system	9
1x5.4 Vision, Vantage	Solid Profile with Radius Corners	Solid		16	12	10	114 lbf per #7x2-1/4" SS Deck Screw	9
		Grooved		16	12	10	100 psf with MoistureShield Deck Clip or Aegis Clip hidden fastening system	9



7/8x5.5 Lifecycle, Modern View	Solid Profile with Radius Corners	Solid		16	12	10	114 lbf per #7x2-1/4" SS Deck Screw	8
		Grooved		16	12	10	100 psf with MoistureShield Deck Clip or Aegis Clip hidden fastening system	8
1x5 Private Label	Oval Fluted Profile with Radius Corners	Solid		16	12	10	114 lbf per #7x2-1/4" SS Deck Screw	9
		Grooved		16	12	10	100 psf with MoistureShield Deck Clip or Aegis Clip hidden fastening system	9
1x5.4 Private Label	Oval Fluted Profile with Radius Corners	Solid		16	12	10	114 lbf per #7x2-1/4" SS Deck Screw	9
		Grooved		16	12	10	100 psf with MoistureShield Deck Clip or Aegis Clip hidden fastening system	9



7/8x5.4 Lifecycle	Oval Fluted Profile with Radius Corners	Solid		14	12	10	114 lbf per #7x2-1/4" SS Deck Screw	8
		Grooved		14	12	10	100 psf with MoistureShield Deck Clip or Aegis Clip hidden fastening system	8
2x4 Vantage	Solid Profile with Radius Corners	Solid		16	12	10	114 lbf per #7x2-1/4" SS Deck Screw	14
2x6 Vantage, Vision	Solid Profile with Radius Corners	Solid		24	18	16	114 lbf per #7x2-1/4" SS Deck Screw	16
2x8 Vision	Solid Profile with Radius Corners	Solid		24	18	16	114 lbf per #7x2-1/4" SS Deck Screw	16

A.2 Deck Boards: Co-extrusion Production Method - Elevate and Meridian								
Nominal Size	Shape	Edge Type	Deck Board Profile	Maximum Span Rating (in) for Allowable Load (psf)			Fastening Schedule ¹ and Uplift Values	Maximum Stair Tread Span (in)
				100	150	200		
1x5.4 Meridian	Solid Profile with Radius Corners	Solid		16	12	10	114 lbf per #7x2-1/4" SS Deck Screw	10 ²
		Grooved		16	12	10	100 psf with MoistureShield Deck Clip or Aegis Clip hidden fastening system	10 ²
1x5.4 Elevate	Oval Fluted Profile with Radius Corners	Solid		16	12	10	114 lbf per #7x2-1/4" SS Deck Screw	8
		Grooved		16	12	10	100 psf with MoistureShield Deck Clip or Aegis Clip hidden fastening system	8

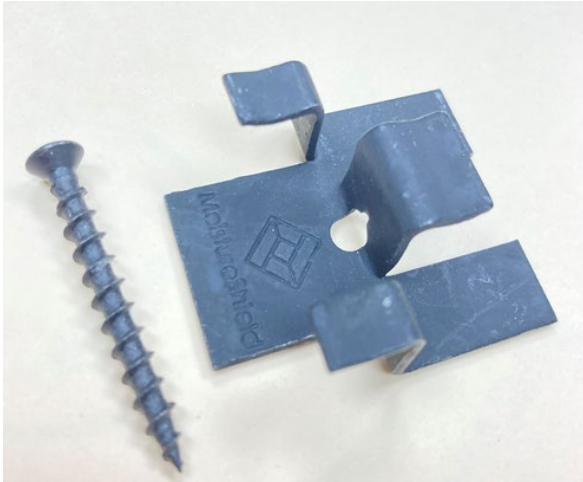
for SI conversion: 1 in = 25.4 mm, 1 psf = 47.9 Pa, 1 lbf = 0.0044 kN

¹ Deck boards installed with screws must be attached to each joist with two #7 x 2-1/4-in. stainless steel deck screws. Deck boards with side grooves installed with hidden fastening system (MoistureShield Deck Clip and Aegis Clip – see image below) must be attached to each joist with a fastener according to the manufacturer’s installation instructions.

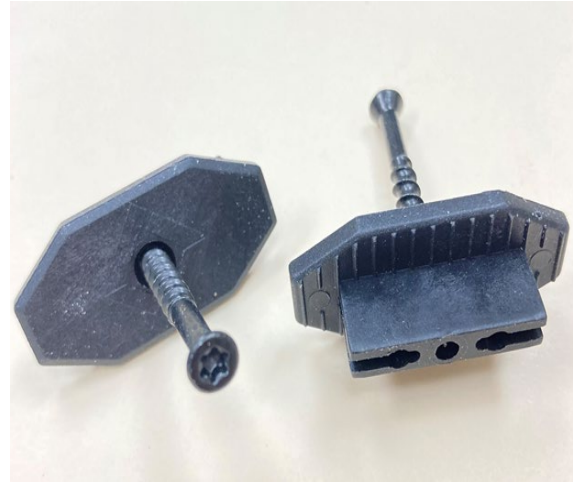
² Stair treads installed with two #10 x 2-1/2-in. stainless steel deck screws on each joist.

The joists to which the deck boards are attached must have a minimum specific gravity of 0.50 or better (Southern Pine) or the fastening must be designed. Deck boards and stair treads must be installed over at least two (2) spans. Stair treads must be installed perpendicular to supporting members.

No duration of load increase is allowed for the uplift values noted in Table 1 in this Report.



MoistureShield Deck Clip Hidden Fastening System



Aegis Clip Hidden Fastening System