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DIVISION: 06—WOOD AND PLASTICS
Section: 06500—Structural Plastics

REPORT HOLDER:

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EVALUATION SUBJECT:

PROCELL DECKING SYSTEM

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2003 *International Building Code*® (IBC)
- 2003 *International Residential Code*® (IRC)

Properties evaluated:

- Structural
- Durability
- Surface-burning characteristics

2.0 USES

The Procell Decking System is limited to exterior use as deckboards for exterior balconies, porches, decks and stair treads of buildings of Type V-B (IBC) construction or buildings constructed in accordance with the IRC.

3.0 DESCRIPTION

3.1 General:

The Procell Decking System is produced from a solid composite material consisting of cellular vinyl and agrifibre. The decking is mono-extruded, and is nominally $\frac{5}{4}$ inches thick by 6 inches wide (38.1 mm by 152.4 mm) [actually 1 inch by $5\frac{1}{2}$ inches (25 mm by 140 mm)] by 12 feet, 16 feet, or 20 feet long. The decking is manufactured in four colors: slate, brownstone, clay and ivory. See Figure 1.

When tested in accordance with ASTM E 84, the Procell Decking System has a flame-spread index of no greater than 200.

3.2 Durability:

When subjected to weathering, insect attack and other decaying elements, the Procell Decking System material is equivalent in durability to preservative-treated or naturally durable lumber. Accordingly, it is permitted to be used as an

alternative to preservative-treated or naturally durable lumber on exterior decks, porches and balconies.

4.0 INSTALLATION

4.1 General:

The Procell Decking System must be installed in accordance with the manufacturer's published installation instructions, subject to the conditions of use in this report. A copy of the manufacturer's published installation instructions must be available on the jobsite at all times during installation.

4.2 Deck Boards:

The Procell Decking System must be limited to the maximum allowable vertical (gravity and wind uplift) loads indicated in Table 1. The allowable loads are valid for decking exposed to ambient air temperatures between -20°F (-29°C) and 125°F (52°C).

The Procell Decking System must be installed perpendicular to the supporting construction, which must be limited to a maximum spacing as prescribed in Table 1. The Procell Decking System must be installed with a minimum edge gap of $\frac{1}{8}$ inch (3 mm) between parallel boards, and a minimum $\frac{1}{16}$ -inch (1.6 mm) gap must be provided at each end for every 16 feet (4879 mm) of board length for every 20°F (11.1°C) of temperature difference between the temperature at the time of installation and the maximum expected in-service temperature. The end of each deck board must be supported by a joist. Double joists are required where decking butt joints occur.

4.3 Deck Boards Used as Stair Treads:

The Procell Decking System, when used as stair treads, is satisfactory to resist the code-prescribed concentrated load of 300 lbf (1.33 kN) when installed at a maximum, perpendicular, center-to-center spacing of the supporting construction as given in Table 2. Additionally, a treated southern pine 2-by-6 is installed flatwise between the stringers and directly beneath the deck boards using Simpson A23 connectors attached with hot galvanized 9 gage by $1\frac{1}{2}$ -inch joist hanger nails. See Figure 2.

4.4 Fasteners:

The Procell Decking System must be fastened with two No. 7 by $2\frac{1}{4}$ -inch-long (57.2 mm) stainless steel wood screws at each supporting wood member having a minimum specific gravity of 0.50. The minimum edge and end distance for fasteners is 1 inch (25.4 mm).

5.0 CONDITIONS OF USE

The Procell Decking System described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** This product must be limited to exterior use as deck boards for balconies, porches, decks, stair treads and

similar appendages of buildings of Type V-B (IBC) construction and buildings constructed in accordance with the IRC.

- 5.2** Installation must comply with this report, the manufacturer's published instructions and the applicable code. When the manufacturer's published installation instructions differ from this report, this report governs.
- 5.3** The use of the Procell Decking System as a component of a fire-resistance-rated assembly is outside the scope of this report.
- 5.4** The compatibility of the fasteners with the supporting construction, including chemically treated wood, is outside the scope of this report.
- 5.5** The Procell Decking System must be directly fastened to supporting construction. Where required by the code official, engineering calculations and construction documents consistent with this report must be submitted for approval. The calculations must verify that the supporting construction complies with the applicable building code requirements and is adequate to resist the loads imparted upon it from the products and systems discussed in this report. The documents must contain details of the attachment to the supporting structure

consistent with the requirements of this report. The documents must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

- 5.6** Adjustment factors outlined in the AF&PA National Design Standard and applicable codes do not apply to the allowable capacity and maximum spans for the Procell Decking System.
- 5.7** The Procell Decking System is produced in Foley, Alabama, under a quality control program with inspections by ATI (AA-676).

6.0 EVIDENCE SUBMITTED

Data in accordance with applicable portions of the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (AC174), dated June 2006.

7.0 IDENTIFICATION

The deck board described in this report must be identified by a label, on each individual piece or on the packaging, bearing the Procell, LLC, name, the Procell Decking System name, the name of the inspection agency (ATI) and the evaluation report number (ESR-1667).

TABLE 1—DECK BOARD SPAN RATING

PRODUCT NAME	MAXIMUM SPAN ¹ (inches)	ALLOWABLE CAPACITY ² (lbf/ft ²)
Procell Decking System	16	100

For **SI**: 1 inch = 25.4 mm; 1 lbf/ft² = 47.9 Pa.

¹Maximum span is measured center-to-center of the supporting construction.

²Maximum allowable capacity is adjusted for durability. No further increases are permitted.

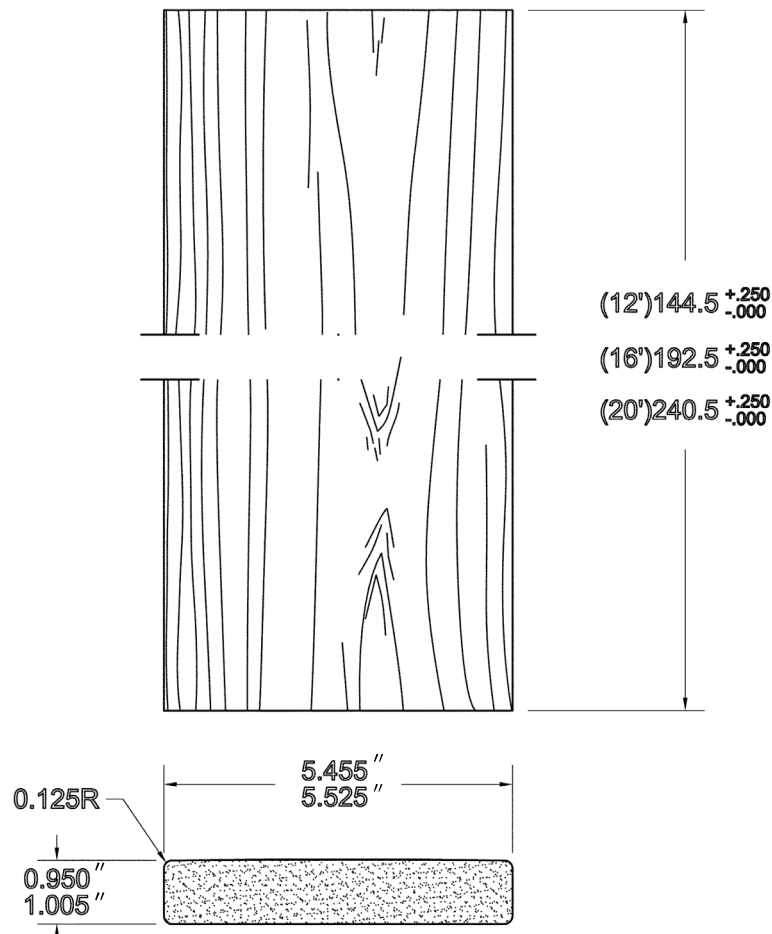
TABLE 2—MAXIMUM STAIR TREAD SPAN²

DECK BOARDS USED AS STAIR TREADS	MAXIMUM SPAN (inches) ¹
Procell Decking System	17.25

For **SI**: 1 inch = 25.4 mm; 1 lbf/ft² = 47.9 Pa.

¹Maximum span is measured center-to-center of the supporting construction with a treated southern pine 2-by-6 installed flatwise between the strings and directly beneath the deck board.

²Based on a minimum 2-span installation.



For SI: 1 inch = 25.4 mm.

FIGURE 1—DECK BOARD SECTION

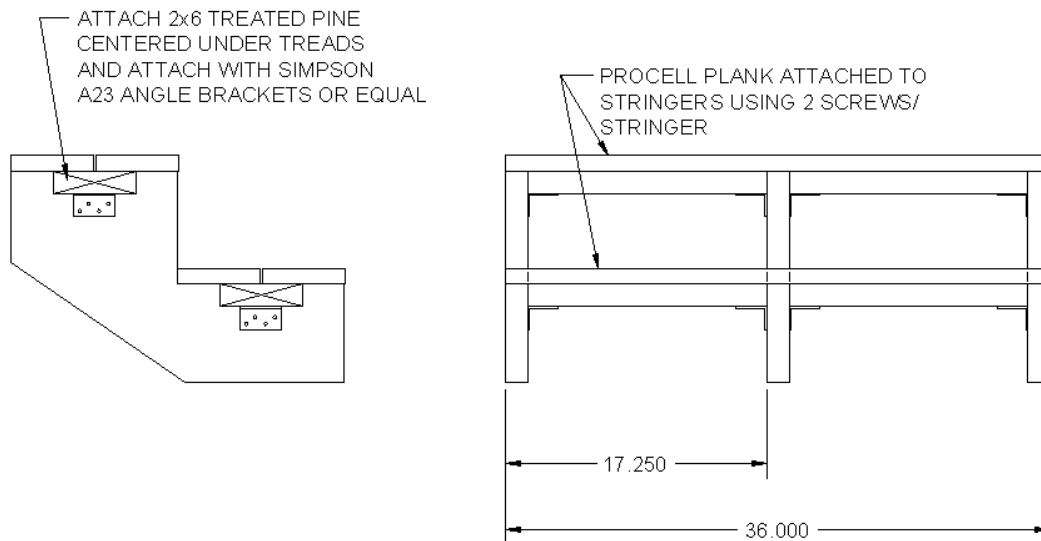


FIGURE 2