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

REPORT HOLDER:

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EVALUATION SUBJECT:

ENDURA BOARD™

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

Endura Board™ is limited to exterior use as deckboards for exterior balconies, porches and decks of Group R Occupancy (residential) buildings of Type V-B (IBC) construction or buildings constructed in accordance with the IRC.

3.0 DESCRIPTION

3.1 General:

Endura Board™ is a solid plank that consists of approximately 40 percent minerals, 55 percent HDPE polyethylene and 5 percent other additives. The plank is mono-extruded, and is nominally $\frac{5}{4}$ inches by 6 inches (38.1 mm by 152.4 mm) [actually 1 inch by $5\frac{1}{2}$ inches (25 mm by 140 mm)]. The planks are manufactured in four colors: slate (gray), sahara (light tan), granite (light gray) and white. See Figure 1.

When tested in accordance with ASTM E 84, Endura Board™ has a flame-spread index of no greater than 200.

3.2 Durability:

When subjected to weathering, insect attack and other decaying elements, Endura Board™ 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:

Endura Board™ decking shall 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 instructions shall be available on the jobsite at all times during installation.

4.2 Deck Boards:

Endura Board™ shall be limited to the maximum allowable vertical (gravity and wind uplift) loads indicated in Table 1. The allowable loads are valid for boards exposed to ambient air temperatures between -20°F (-29°C) and 125°F (52°C).

Endura Board™ shall be installed perpendicular to the supporting construction, which shall be limited to a maximum spacing as prescribed in Table 1. Endura Board™ shall 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 shall 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 temperature. The end of the boards shall be supported by double joists.

4.3 Fasteners:

Endura Board™ shall be fastened with two No. 8 by $2\frac{1}{2}$ -inch-long (63.5 mm) stainless steel wood screws at each supporting solid sawn wood member. The minimum edge and end distance for fasteners is 1 inch (25.4 mm).

5.0 CONDITIONS OF USE

The Endura Board™ 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 shall be limited to exterior use as a deck board for balconies, porches, decks and similar appendages of Group R Occupancy buildings of Type V-B (IBC) construction and structures constructed in accordance with the IRC.
- 5.2** Installation shall 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 shall govern.
- 5.3** The use of the Endura Board™ 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 Endura Board™ shall be directly fastened to supporting construction. Where required by the code official, engineering calculations and construction documents consistent with this report shall be submitted for approval. The calculations shall 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 shall contain details of the attachment to the supporting structure consistent with the requirements of this report. The documents shall 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 The use of Endura Board™ as a stair tread is outside the scope of this report.

5.7 Endura Board™ is produced in Wauzeka, Wisconsin, under a quality control program with inspections by PFS, Inc. (AA-652).

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 April 2002 (editorially revised July 1, 2004; corrected December 2004).

7.0 IDENTIFICATION

Each deck board described in this report shall be identified by a label bearing the Crawford Industries, LLC, name and address, the Endura Board™ name, the name of the inspection agency (PFS, Inc.) and the evaluation report number (ESR-1890).

TABLE 1— DECK BOARD SPAN RATING

PRODUCT NAME	MAXIMUM SPAN ¹ (inches)	ALLOWABLE CAPACITY ² (lbf/ft ²)
Endura Board™	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.

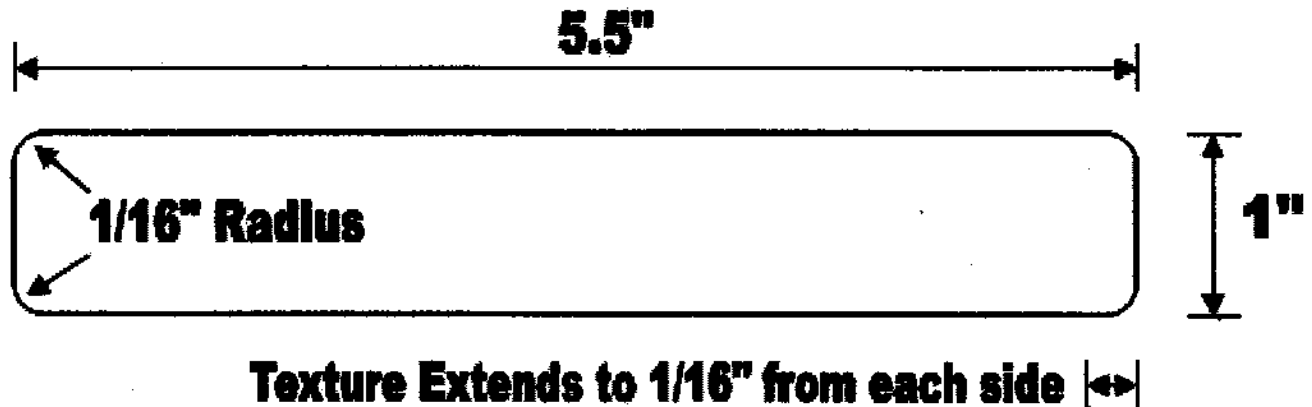


FIGURE 1