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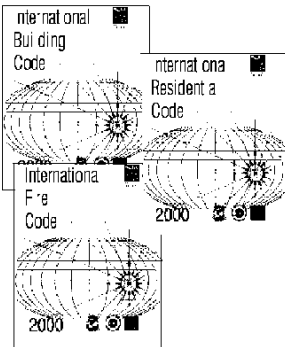
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BOCA International Evaluation Report

**evaluation scope****Compliance with the following code:***BOCA National Building Code/1999***STRUCTURAL**

- Section 106.4 Alternative materials and equipment
- Section 1604.5.4 Floors
- Section 1606.1 Design live load
- Section 1609.1.4 Uplift resistance
- Section 1710.1 General
- Section 1710.3.1 Test procedure
- Section 2305.14 Flooring

QUALITY CONTROL

- Section 1705.2 Inspection of fabricators

DURABILITY

- Section 106.4 Alternative materials and equipment
- Section 1404.2 Durability

conditions of use

This report is limited to the applications and products as stated herein. BOCA-ES intends that the report be used by the code official to determine that the report subject complies with the code requirements specifically addressed, provided that this product is installed in accordance with the following conditions:

- Nexwood Decking shall be installed in accordance with the *Nexwood Installation Instructions* and this report. Nexwood Industries, Ltd. shall provide the user of this report with the *Nexwood Installation Instructions*. Where the manufacturer's installation instructions differ from this report, this report shall be null and void.
- Nexwood Decking shall be limited to use as a flooring system for exterior balconies, porches, decks, and similar appendages for buildings of combustible construction where the floor/ceiling assemblies are permitted to be unprotected construction.
- Nexwood Decking shall be limited to applications requiring a maximum uniformly distributed live load of 100 psf (4.8 kPa) and when installed in accordance with this report, resists the maximum uplift loads required by the *BOCA National Building Code/1999*.
- The maximum spacing of the construction supporting Nexwood Decking, shall be 24 inches (610 mm) on center.
- Fasteners used for the installation of the Nexwood Decking shall be as described in this report. Other methods of fastening are beyond the scope of this report.
- The static coefficient of friction of Nexwood Decking has been determined to be 0.32 parallel to the plank length and 0.48 perpendicular to the plank length in a dry condition of use. The appropriateness of the determined static coefficient of friction, with respect to the requirements for slip resistance in Section 1005.4 of the *BOCA National Building Code/1999*, is subject to the specific approval of the code official.
- The use of Nexwood Decking as a component of a fire-resistance rated assembly is beyond the scope of this report.

description

Nexwood Decking is a flooring plank composed of thermoplastic composite material comprised of rice hulls, high-density polyethylene, a coupling agent and a processing aid compound. The walking surface of the Nex-wood Decking is wire brushed to provide a coarse surface. Nexwood Decking is used as an alternative to a combustible flooring system for exterior balconies, porches, decks and similar appendages for buildings of combustible construction where the floor/ceiling assemblies are permitted to be unprotected construction.

Nexwood Decking is manufactured in nominal 2 × 6, 2 Rib and 3 Rib profiles. The actual dimensions of the profiles are 1 1/2 in. high × 5 1/2 in. wide × 0.25 in. thick (38 × 139 × 6.4 mm). The 2 Rib profile has 2 interior 0.25 in. (6.4 mm) stiffeners and the 3 Rib profile has 3 interior 0.25 in. (6.4 mm) stiffeners. Both profiles are available in standard 8, 12, 16, 20, etc., ft. (2 438, 3 658, 4 877, 6 096, etc., mm) lengths, or custom lengths. Nexwood Decking is fastened to the supporting construction with 2 galvanized, ceramic, or stainless steel No. 8 × 3 in. (76 mm) long screws at each joist. The screws shall be spaced 3/4 in. (19.0 mm) from the edge of the board. See Figure 1 of this report.

Research Report**99•8.1****MANUFACTURER:**

Nexwood Industries, Ltd.
1327 Clark Boulevard
Brampton, Ontario
Canada L6T 5R5

DIVISION 06
WOOD AND PLASTICS

Section 06500
Structural Plastics

EVALUATION SUBJECT:**Nexwood Decking****PRINTED JANUARY, 2000****Company Address Change:****APRIL, 2001****Page 1 of 3**

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Items requiring verification

The following items are related to the use of the report subject, but not within the scope of this evaluation. However, these items are related to the determination of code compliance:

- ✓ Construction documents indicating compliance with this report.
- ✓ Determination of the requirements for slip resistance for the specific application.

Information submitted

- Intertek Testing Services Report, No. 284-4927-1, dated January 28, 1999, containing results of testing to determine flexural stress, linear thermal expansion, and coefficient of friction in accordance with ASTM D790, D696 and D2394, respectively.
- Intertek Testing Services Report, No. 284-4872-1, dated February 8, 1999, revised September 9, 1999, containing results of testing to determine impact resistance, rate of burning and screw withdrawal in accordance with ASTM D256, D635 and D1037, respectively. Full-scale load tests were also conducted to determine design loads.
- Intertek Testing Services Report, No. 193-7122, dated February 4, 1999, revised September 9, 1999, containing results of testing to determine surface burning, in accordance with ASTM E84. The results indicate that Nexwood Decking has a flame spread index of 65 and a smoke-developed index of 340.
- Report No. R9905-1, by T.C. Chan, P.Eng., dated February 2, 1998, containing calculations to determine the allowable uniformly distributed live and uplift loads of Nexwood 2×6, 2-Rib Decking. Using the load test data, the allowable loads were governed by the allowable deflection.
- Ortech Report, No. 97-J23-3397-13-2, dated March 17, 1997, containing results of testing to determine the results of accelerated weathering in accordance with ASTM G26.
- Intertek Testing Services Inspection Manual, dated July 1999, and CRF Technologies Group Ltd. Quality Procedure Manual, dated July 1999, signed by representatives of Intertek Testing Services and CRF Technologies Group Ltd., containing procedures for maintaining the quality assurance program for Nexwood Decking and establishing Intertek Testing Services as the third-party inspection agency.

Application for permit

To aid in the determination of compliance with this research report, the following represents the minimum level of information to accompany the application for permit:

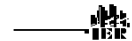
- The language “See BOCA Evaluation Services, Inc. Research Report No. 99-8.”
- Construction documents consistent with this report shall be provided with permit applications. The following items, at a minimum, shall be provided on the construction documents:

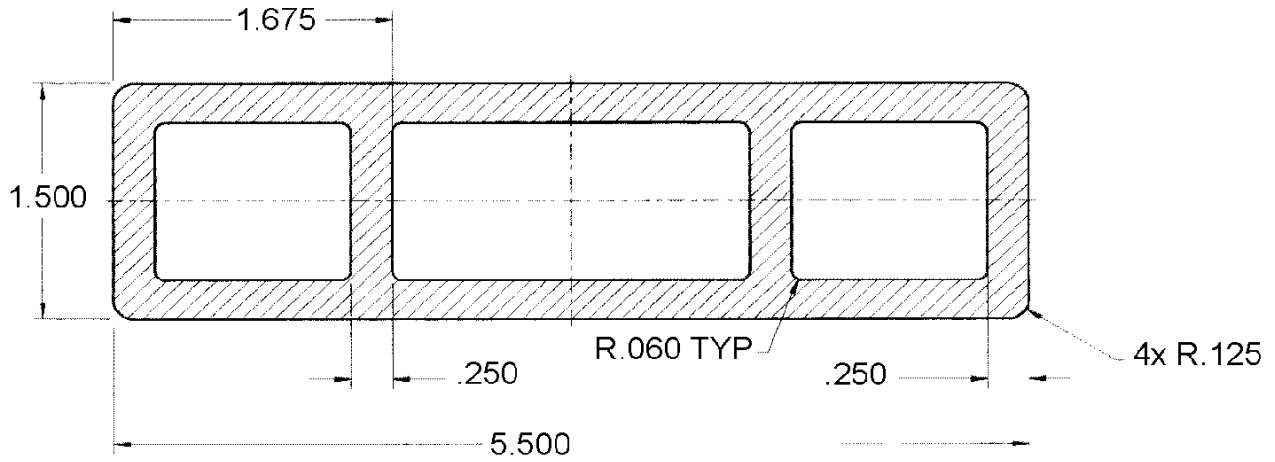
- Building construction type.
- The on center spacing of the supporting construction.
- The design live load imposed on Nexwood Decking.
- Type and location of fasteners to secure Nexwood Decking to the supporting construction.
- Design calculations and details verifying the ability of the construction supporting Nexwood Decking, including but not limited to the posts, beams, joists and associated connections to carry all superimposed loads placed upon them as required by Chapter 16 of the *BOCA National Building Code/1999*. These documents shall be prepared by an individual qualified in the application of the structural design principles involved. The individual preparing such documents shall possess the registration or license in accordance with the professional registration laws of the state in which the project is constructed.

Product identification

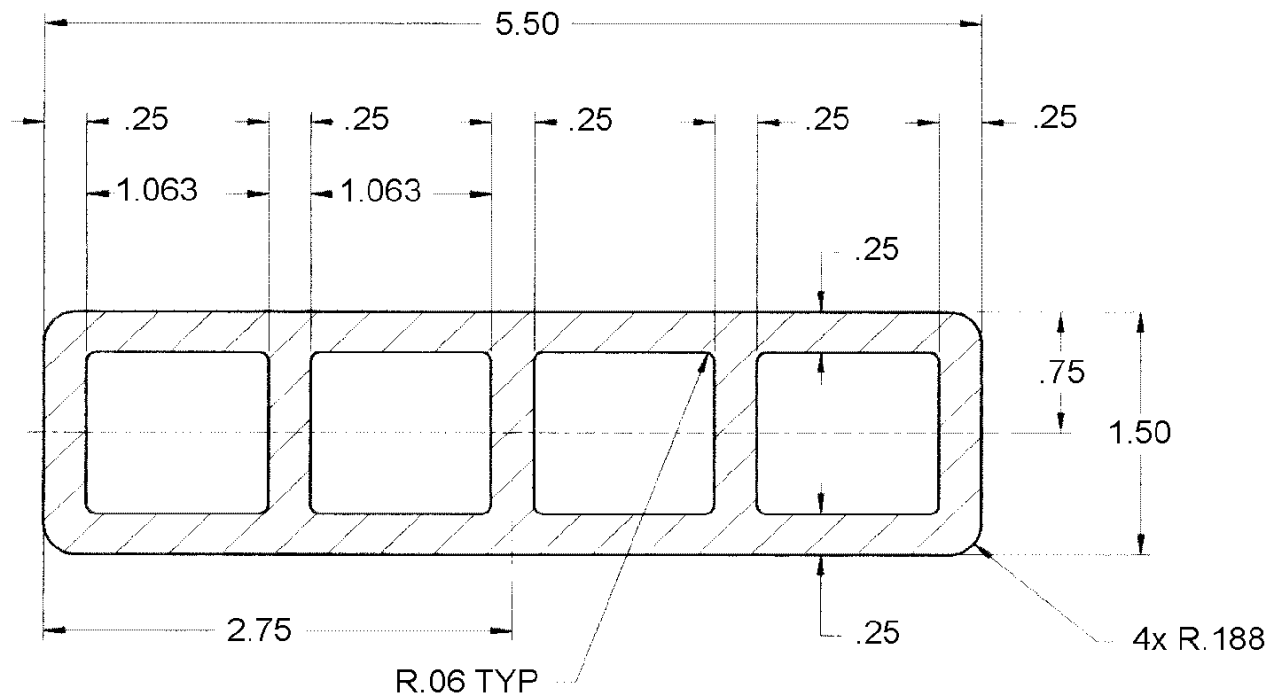
Nexwood Decking, or the packaging, manufactured in accordance with this research report shall bear the following identification:

- “See BOCA Evaluation Services, Inc. Research Report No. 99-8.”
- Additionally, each piece of Nexwood Decking shall have a permanent label containing the mark of the third-party inspection agency, Intertek Testing Services.





2 Rib Profile



3 Rib Profile

Figure 1*

*THESE DRAWINGS ARE FOR ILLUSTRATION PURPOSES ONLY. THEY ARE NOT INTENDED FOR USE AS CONSTRUCTION DOCUMENTS FOR THE PURPOSE OF DESIGN, FABRICATION OR ERECTION.

NOTICE TO REPORT USERS

This report is subject to annual certification. Reports that are not certified shall not be used or referred to. To determine the status of certification of this report, contact BOCA Evaluation Services, Inc., or consult the latest edition of the *BOCA International Product Evaluation Listing* published periodically in the BOCA magazine, or call the Fax-On-Demand Service at BOCA, extension 500.

This report is subject to the conditions listed herein and to the specific product, data and test reports submitted by the applicant requesting this report. Independent test were not performed by BOCA Evaluation Services, Inc. and BOCA-ES specifically does not make any warranty, either expressed or implied, as to any findings or other matter in this report or as to any product covered by this report. Evaluation reports are not to be construed as representing aesthetics or any other attributes not specifically addressed nor as an endorsement or recommendation for the use of the report subject. This disclaimer includes, but is not limited to, merchantability.

Please contact BOCA Evaluation Services, Inc., with any questions you may have regarding this report. Additionally, please contact us if you have any information on the performance of the product described herein which is contrary to this report.

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