CORNERSTONE SPECIALTY WOOD PRODUCTS, LLC®
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RESINDEK® FLOORING PANELS

CSI Section:
09 64 19 Wood Composition Flooring

1.0 RECOGNITION

ResinDek® flooring panels are recognized for use as interior floor finish and floor covering materials for installation on corrugated metal decking. The panels are recognized for use in combustible and non-combustible construction, and as part of a fire-resistance-rated assembly when constructed in accordance with Section 3.2 or 3.3 of this report. The physical, structural, surface-burning, and fire-resistance properties of the panels have been evaluated for compliance with the following codes:

- National Building Code of Canada 2015 (NBC 2015)
- National Building Code of Canada 2010 (NBC 2010)
- Quebec Construction Code, Chapter I Building 2015 – supplement attached
- Ontario 332/12 Building Code (Version July 20, 2018) –supplement attached
- Alberta Building Code 2014 – supplement attached
- British Columbia Building Code 2018 – supplement attached

2.0 LIMITATIONS

Use of ResinDek® panels recognized in this report is subject to the following limitations:

2.1 The design of the supporting floor and structure has not been evaluated and is outside the scope of this report. Documentation shall be prepared by a design professional to show that the supporting floor and structure will carry the required load.

2.2 ResinDek® panels shall be limited to interior use.

2.3 ResinDek® panels shall be stored in a dry location and kept in a flat position.

2.4 ResinDek® panels shall not be subject to prolonged and extensive soaking, hosing down, or wetting.

2.5 Use of the panels as part of a floor diaphragm to resist lateral loading is outside the scope of this review.

2.6 ResinDek® panels are produced in Louisville, Kentucky.

3.0 PRODUCT USE

Use of ResinDek® panels shall comply with the applicable codes, the manufacturer's installation instructions, and this report. Where conflicts occur, the most restrictive shall govern.

3.1 Design: ResinDek® panels are designed to be used as a floor covering material applied over corrugated metal decking located in mezzanines, equipment platforms, industrial work platforms, pick modules, and self-storage facilities. Vehicle loading shall not exceed 908 kilograms (2000 lbs). For loadings greater than 908 kilograms (2000 lbs), the manufacturer shall be contacted. The panels are typically used over standard SDI B and N steel decks and similar profiles. More than one layer of ResinDek® flooring panels may be installed to achieve specific thickness or performance characteristics. Floor loading shall not exceed the load-carrying capacity of the metal deck or the supporting structure.

3.2 Fire-resistance-rated Assemblies:

3.2.1 One-hour Fire-resistance-rated Floor/ceiling Assembly: ResinDek® may be used as part of a one-hour fire-resistance-rated assembly when used as described in Sections 3.2.1.1 and 3.2.1.2, based on the values in Table D-2.3.12 of the 2015 and 2010 NBC.

3.2.1.1 Floor Construction: Steel joists or floor trusses spaced at a maximum of 610 millimeters (24 inches) on center shall be covered with corrugated metal decking. ResinDek® Floor Panels shall be installed over the metal decking in accordance with Section 3.3.

3.2.1.2 Ceiling Construction: A base layer of 15.9 millimeter-thick ($^5/_8$ inch) Type X gypsum board shall be applied at right angles to the steel framing described in Section 3.2.1.1 of this report and fastened with 25.4-millimeter-long (1-inch) Type S drywall screws spaced at a maximum of 610 millimeters (24 inches) on center. A face layer of 15.9-millimeter ($^5/_8$-inch) Type X gypsum board shall be applied at right angles to the steel framing with the joints of the face layer offset 610 millimeters (24 inches) from the joints of the base layer. The face layer shall be attached through the base layer to the framing with 41.3-millimeter ($1^5/_8$-inch) Type S drywall screws spaced at a maximum of 305 millimeters (12 inches) on center at each side of end joints and intermediate supports, The gypsum

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safely, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.

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board layers shall be fastened together using 38-millimeter-long (1½-inch) Type G drywall screws at a maximum spacing of 305 millimeters (12 inches) on center and placed 51 millimeters (2 inches) back on either side of face layer end joints.

3.2.2 Additional Floor/Ceiling Assemblies: ResinDek® is also recognized for use in 1-, 1 1/2-, and 2-hour restrained and unrestrained fire-resistance-rated assemblies as described in UL Design No. L701 (BXUV.L701).

3.3 Installation: ResinDek® panels are for installation on corrugated metal decking located in mezzanines, equipment platforms, industrial work platforms, pick modules, and self-storage facilities.

3.3.1 General: ResinDek® shall be installed with the label side of the panel facing upward. The panels shall be installed on corrugated metal deck by using a screw gun with an operable clutch. The screw heads shall be driven to just below the panel surface (See Figure 1).

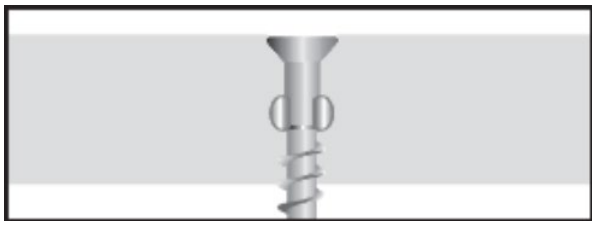

FIGURE 1

The ends of the panels shall meet over the ribs of the corrugated metal deck (see Figure 2). In cases where the panel ends cannot be located over a rib, a 152 millimeter-wide (6-inch-wide), minimum of 0.91-millimeter-thick (20-gauge) steel shim shall be connected to the metal deck as a backing to the joint over the valley.

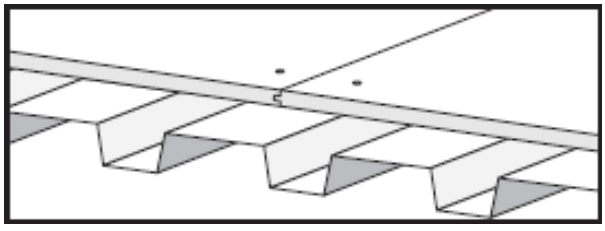

FIGURE 2

The panels shall be installed with a 3-millimeter (1/8-inch) space between the panels and a 9-millimeter (3/8-inch) space around the outside edges of the floors (see Figure 3). When using the ResinDek® MetaGard panels, the Cornerstone shall be consulted on the required gap.

3.3.2 Fasteners: Proprietary ResinDek® screws shall be used to attach the panels to the metal decking. The ResinDek® screw is a No.10-gauge screw, 51 millimeters (2 inches) long, with a number 2 square drive head. The fasteners have self-piercing points, a zinc coating, and are available in gray or beige colors. A minimum of 20 fasteners [24 for 3.048-meter (10-foot) panels] shall be equally spaced throughout each 1.219-meter x 2.438-meter (4-foot x 8-foot) panel as shown in Figure 4 of this report. Edge fasteners shall be located a minimum of 25.4 millimeters (1 inch) from the panel edges.

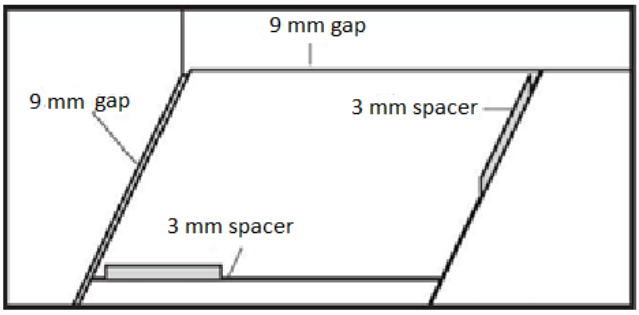

FIGURE 3

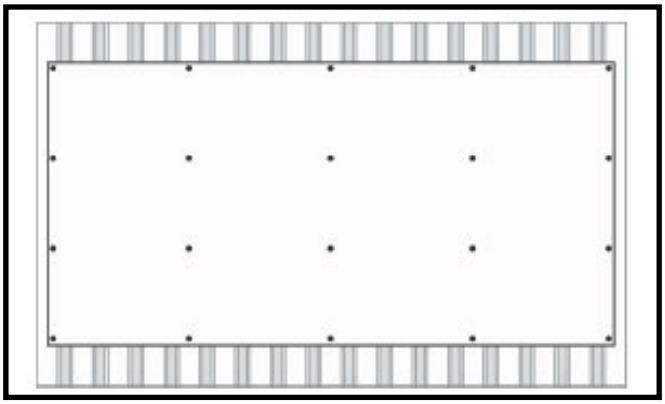

FIGURE 4

4.0 PRODUCT DESCRIPTION

ResinDek® panels are considered as finished floor covering materials as noted in Section 3.1.5.8 of the NBC 2010 and 3.1.5.10 of the NBC 2015. ResinDek® panels are produced from a proprietary blend of moisture-resistant Medium Density Fiberboard (MDF) and High-Density Fiberboard (HDF). The panels are available with a variety of wear surfaces and coatings, such as Grey Diamond Seal 2™, ESD, MetaGard, and TriGard®. For use under various conditions in accordance with the manufacturer's instructions. The panels are also available uncoated for use under dry conditions only.

The panels are nominally 19 millimeters thick by 1219 millimeters wide by 2438 millimeters long (¾-inch thick by 4 feet wide by 8 feet long). 3048-millimeter (10-foot) lengths are also available. Panel options and weights are noted in Table 1.

4.1 Flame-spread Index: When tested in accordance with CAN/ULC S102, the ResinDek® panels installed over a corrugated metal deck, have a flame-spread rating not exceeding 25 and a smoke-developed classification of 20.

4.2 Ignition Characteristics: ResinDek® panels meet the requirements of ASTM D2859 for ignition characteristics.

5.0 IDENTIFICATION

ResinDek® panels are identified by the Cornerstone Specialty Wood Product's name and trademark, product name, and listing report number (UEL-5027). The identification may also include either of the IAPMO Uniform Evaluation Service Marks of Conformity as shown below:

or

IAPMO UES UEL-5027

6.0 SUBSTANTIATING DATA

6.1 Manufacturer's descriptive literature and installation instructions.

6.2 Report of CAN/ULC-S102 testing for Surface Burning Characteristics of Building Materials and Assemblies.

6.3 Report of testing in accordance with ASTM E648 Critical Radiant Flux of Floor Covering Systems.

6.4 Report of testing in accordance with ASTM D2859 Ignition Characteristics of Finished Textile Floor Covering Materials.

6.5 Report of floor load testing in accordance with ASTM E661 Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads.

6.6 Test reports are from laboratories in compliance with ISO/IEC 17025.

6.7 Quality Documentation.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Cornerstone Specialty Wood Product's ResinDek® Panels to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at locations noted in Section 2.6 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

TABLE 1
RESINDEK® SPECIFICATIONS[1]

Panel	Thickness (mm)	Self-Weight (Pa)
ResinDek® LD	19	136.52
ResinDek® SD	19	152.32
ResinDek® MD	19	168.61
ResinDek® HD	19	183.46

Imperial Units: 1 inch = 25.4 mm, 1 psf = 47.9 Pa

[1] The panels are nominally 19 mm in thickness by 1219 mm in width and available in lengths of 2438 mm and 3048 mm. Nominal dimensions are understood to be inexact and are commonly used to define certain product specifications.

QUEBEC CONSTRUCTION CODE SUPPLEMENT

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RESINDEK® FLOORING PANELS

CSI Section:
09 64 19 Wood Composition Flooring

1.0 RECOGNITION

The ResinDek® flooring panels as evaluated and represented in IAPMO UES Listing Report UEL-5027 and with changes as noted in this supplement are a satisfactory alternative for use in buildings built under the following codes (and regulations):

- Quebec Construction Code, Chapter I Building 2015

2.0 LIMITATIONS

Use of the ResinDek® flooring panels described in IAPMO UES UEL-5027 complies with the 2015 Quebec Construction Code, Chapter I Building when meeting the requirements of the National Building Code of Canada 2010.

This supplement expires concurrently with UES UEL-5027.

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ONTARIO 332/12 BUILDING CODE SUPPLEMENT

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CSI Section:
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1.0 RECOGNITION

The ResinDek® flooring panels as evaluated and represented in IAPMO UES Listing Report UEL-5027 and with changes as noted in this supplement are a satisfactory alternative for use in buildings built under the following codes (and regulations):

- Ontario 332/12 Building Code Supplement (Version July 20, 2018)

2.0 LIMITATIONS

Use of the ResinDek® flooring panels described in IAPMO UES UEL-5027 complies with the Ontario 332/12 Building Code when meeting the requirements of the National Building Code of Canada 2010.

This supplement expires concurrently with UES UEL-5027.

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ALBERTA BUILDING CODE SUPPLEMENT

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1.0 RECOGNITION

The ResinDek® flooring panels as evaluated and represented in IAPMO UES Listing Report UEL-5027 and with changes as noted in this supplement are a satisfactory alternative for use in buildings built under the following codes (and regulations):

- Alberta Building Code 2014

2.0 LIMITATIONS

Use of the ResinDek® flooring panels described in IAPMO UES UEL-5027 complies with the Ontario 332/12 Building Code when meeting the requirements of the National Building Code of Canada 2010.

This supplement expires concurrently with UES UEL-5027.

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BRITISH COLUMBIA BUILDING CODE SUPPLEMENT

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1.0 RECOGNITION

The ResinDek® flooring panels as evaluated and represented in IAPMO UES Listing Report UEL-5027 and with changes as noted in this supplement are a satisfactory alternative for use in buildings built under the following codes (and regulations):

- British Columbia Building Code 2018

2.0 LIMITATIONS

Use of the ResinDek® flooring panels described in IAPMO UES UEL-5027 complies with the British Columbia Building Code 2018 when meeting the requirements of the National Building Code of Canada 2015.

This supplement expires concurrently with UES UEL-5027.

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