

ICC-ES Evaluation Report

ESR-2097

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**DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION**
Section: 07 18 13—Pedestrian Traffic Coatings
REPORT HOLDER:
PLI-DEK SYSTEMS, INC.
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EVALUATION SUBJECT:
**PLI-DEK AND CON-DEK WALKING DECK AND ROOF
COVERING SYSTEMS**
1.0 EVALUATION SCOPE
Compliance with the following codes:

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)
- Other Codes (see Section 8.0)

Properties evaluated:

- Durability
- Wind resistance
- Fire classification
- Fire resistance

2.0 USES

The Pli-Dek and Con-Dek systems are walking deck and roof covering systems for use directly over plywood (Pli-Dek) or concrete (Con-Dek) decks. The systems are also used as components of one-hour fire-resistance-rated roof assemblies as described in Section 4.4. The systems provide a Class A or Class B roof covering fire classification as described in Tables 1, 1A and 2.

3.0 DESCRIPTION
3.1 Pli-Dek System:

The Pli-Dek system is a polymer-modified, cementitious walking deck and roof covering system that consists of a plywood substrate covered with expanded metal lath; a polymer-modified cementitious base coat; an optional reinforcing fabric layer; and intermediate and sealer coats. See Section 4.0 and Tables 1 and 2 for recognized system configurations and corresponding component requirements.

3.1.1 Materials:

3.1.1.1 Substrate: Exterior-grade plywood must comply with U.S. DOC PS-1 or PS-2. Minimum thickness is specified in Tables 1 and 2 of this report.

3.1.1.2 Metal Lath: Metal lath must be a minimum 2.5-pound-per-square-yard (1.36 kg/m²), hot-dipped galvanized lath, complying with ASTM C847.

3.1.1.3 Staples: Staples must be No. 16 gage, ⁷/₈-inch-crown (22.2 mm), ⁵/₈-inch-long (15.9 mm), corrosion-resistant staples complying with ASTM F1667.

3.1.1.4 Pli-Dek GU-80-1 Gray Base: A proprietary mixture of portland cement and silica sand packaged in 46-pound (20.9 kg) bags that is mixed on-site with the GU-80-1 Liquid Admix, at a ratio of 1 gallon (3.8 L) of Liquid Admix for each 46-pound (20.9 kg) bag of GU-80-1 Gray Base, in accordance with the manufacturer's instructions. The mixture is used as a component of the base coat and intermediate coat of Pli-Dek systems.

3.1.1.5 Pli-Dek GU-80-1 Top Coat: A proprietary mixture of portland cement and silica sand packaged in 46-pound (20.9 kg) bags that is mixed on-site with the GU-80-1 Liquid Admix, at a ratio of 1.25 gallons (4.7 L) of GU-80-1 Liquid Admix for each 46-pound (20.9 kg) bag of GU-80-1 Top Coat, in accordance with the manufacturer's instructions. The mixture is used as a component of the intermediate coat of Pli-Dek systems and as a component of the third coat of the Con-Dek system.

3.1.1.6 Pli-Dek GU-80-1 Custom Top Coat: A proprietary mixture of portland cement and silica sand packaged in 46-pound (20.9 kg) bags that is mixed on-site with the GU-80-1 Liquid Admix, at a ratio of 1.25 gallons (4.7 L) of GU-80-1 Liquid Admix for each 46-pound (20.9 kg) bag of GU-80-1 Custom Top Coat, in accordance with the manufacturer's instructions. The mixture is used as a component of the intermediate coat and third coat of the Pli-Dek CF System and as a component of the third coat of the Con-Dek system.

3.1.1.7 Pli-Dek GU-80-1 Liquid Admix: A polyacrylic emulsion available in 5-gallon (18.9 L) containers, and used as a component of the base coat and intermediate coat of Pli-Dek systems and as a component of the third coat of the Con-Dek system.

3.1.1.8 PD Epoxy: A two-part amide epoxy, either clear or pigmented, packaged in 1-gallon (3.8 L) containers for on-site mixing in equal parts by volume. The workable time of the epoxy mixture is 45 minutes, with curing in eight hours at 75°F (23.8°C). The epoxy is used as a sealer coat in the Pli-Dek T system.

3.1.1.9 Pli-Dek GS-88-1: A proprietary water-based acrylic mixture available in 5-gallon (18.9 L) containers. Curing time is two hours at 75°F (23.8°C). The mixture is used as a sealer coat for both Pli-Dek and Con-Dek systems.

3.1.1.10 Pli-Dek GS-99-1: A proprietary water-based acrylic mixture available in 5-gallon (18.9 L) containers. The mixture is used as a sealer coat for both Pli-Dek and Con-Dek systems.

3.1.1.11 PD Resin: PD Resin is a liquid polymer bonding resin used as an optional coating for the Pli-Dek B and Pli-Dek U systems, and as the base and intermediate coats for the Con-Dek system, as noted in Table 1 of this report. The resin is supplied in 5-gallon (18.9 L) containers.

3.1.1.12 Fiberglass Mat: The fiberglass mat must be a multidirectional chopped strand mat weighing 0.75 ounce per square foot (0.23 kg/m²).

3.1.1.13 Pli-Dek Seam Paper: Pli-Dek Seam Paper is a 2-inch-wide (51 mm), water-resistant, reinforced, asphalt-laminated Kraft paper material that is used to cover plywood joints.

3.1.1.14 Aggregate: Natural sand, pebble or crushed rock, ranging in size from ASTM E11 No. 60 sieve up to, and including, ³/₈ inch (9.5 mm).

3.2 Con-Dek System:

The Con-Dek system is a fiberglass fabric reinforced cementitious walking deck and roof covering system that consists of a 0.75-ounce-per-square-foot (0.23 kg/m²) fiberglass mat, a liquid polymer resin, polymer-modified cementitious coats, and sealer coats applied directly to a concrete substrate. See Sections 3.1.1 and 4.3.2 and Table 1A for system configuration and component requirements.

3.2.1 Materials:

3.2.1.1 Substrate: The concrete substrate must comply with the applicable code and must have a minimum compressive strength of 2500 psi (17238 kPa).

3.2.1.2 Other Components: The Con-Dek system consists of components as described in Sections 3.1.1.5 through 3.1.1.7, 3.1.1.9 through 3.1.1.12, and 3.1.1.14.

4.0 INSTALLATION

4.1 General:

The Pli-Dek and the Con-Dek systems must be installed by applicators trained and approved by Pli-Dek Systems, Inc., in accordance with this report, the manufacturer's published installation instructions and the applicable code. The manufacturer's published installation instructions must be available on the jobsite during installation.

4.2 Pli-Dek System:

4.2.1 Preparation of Substrates: The plywood substrate must be installed in accordance with the applicable code, and must be clean, dry and free from dirt and other foreign material that may prevent adhesion of the base coat. All substrate joints must be tongue-and-groove or be blocked with nominally 2-by-4 wood members. All substrate joints must be gapped ¹/₈ inch (3.2 mm) and covered with Pli-Deck Seam Paper, which then must be tacked in place. Seam paper ends must overlap a minimum of 2 inches (51 mm). All valleys, openings, parapets, walls, sliders, door thresholds, jambs, posts, scuppers, penetrations, fascia or adjuncts must be flashed with minimum No. 26 gage [0.019 inch (0.48 mm)] corrosion-resistant metal, and caulked. Adequate drainage must be provided in accordance with the applicable code.

4.2.2 Metal Lath: Metal lath must be laid out over the entire substrate surface, with joints overlapping a minimum

of ³/₄ inch (19.1 mm). The lath must overlap metal flashings a minimum of 1¹/₂ inches (38 mm). The lath must be stapled in place with No. 16 gage, ⁵/₈-inch-long-by-⁷/₈-inch-wide (15.9 mm by 22.2 mm), corrosion-resistant staples, no less than twelve per square foot (129 per m²). The metal lath must be stapled together at the lath lap joints and where the lath overlaps the seam paper, with staples not more than 2 inches (51 mm) apart.

4.2.3 Coating Application: One bag of GU-80-1 must be mixed with 1 gallon (3.8 L) of GU-80-1 Liquid Admix for use as the base coat for the systems described in Tables 1 and 2. This mixture must be applied at the coverage rate noted in Tables 1 and 2 and must be troweled into the metal lath in such a manner that all holes and voids are filled to full depth and none of the lath or staples is exposed. Under normal working conditions at an ambient air temperature of 70°F (21.1°C), finish coatings can be applied within 24 hours of the base coat application. The intermediate coat and sealer coat must be applied over the base coat, in accordance with the schedule in Tables 1 and 2 of this report.

An optional fiberglass and resin coating may be applied over the base coat of systems (contact Pli-Dek for installations that require this application), as outlined in Footnote 2 of Table 1. The fiberglass mat must be laid over the deck with minimum and maximum overlaps of ¹/₄ and ¹/₂ inch (6.4 and 12.7 mm), respectively, and extending to the furthest edge of the deck. PD Resin must then be applied over the mat at a rate of 1 gallon per 50 square feet (0.815 L/m²), and must be worked into the mat using a ¹/₂-inch (12.7 mm) nap roller or trowel. After the resin is allowed to dry for a minimum of eight hours, the surface must be checked for any blemishes, air pockets, or bubbles, and for any items that may have become embedded. Areas containing such items must be cut out and filled with a fiberglass mat and PD Resin as described above. Pinholes, if found, must be sealed by applying PD Resin over the affected area at a rate of 1 gallon per 100 square feet (0.408 L/m²) until the pinholes are sealed. The fiberglass and resin coating must cure for a minimum of two to six hours before application of the other coats required in Tables 1 and 2.

The temperature range for application is a minimum of 50°F (10°C) and a maximum of 110°F (43°C), with ideal conditions being between 60°F (15.6°C) and 90°F (32.2°C) in high humidity. The coatings must not be applied in moist or inclement weather. Pot life and curing time vary with temperature and humidity. At 70°F (21.1°C), the maximum working life is one hour.

4.2.4 Pli-Dek U—Underlayment for Ceramic Tile: The system must be applied in accordance with the schedule in Table 1 of this report. After curing for eight hours at 75°F (23.8°C), the surface can be used as a backing for exterior adhered veneer, such as ceramic tiles, applied in accordance with the veneer manufacturer's instructions and the applicable code.

4.2.5 Method of Repair: The damaged area must be completely removed, including the base coat and lath. New metal lath must be stapled to the clean, dry substrate, and the system reapplied as described in Sections 4.2.1 through 4.2.4 of this report. If substrate damage occurs, the retention of the fire-resistance and strength properties of the system must be investigated.

4.3 Con-Dek System:

4.3.1 Preparation of Substrate: Concrete substrates must be designed and installed in accordance with the requirements of the applicable code. The concrete surface must be free of loose particles, fins, ridges, voids or air-entrained holes, curing agents, bond breakers, oil, grease,

dust or any foreign matter which would prevent bonding. Control and expansion joints must be installed at stress concentration points to control cracking. The concrete surface to receive coatings must be roughened by water/sand/bead/shot blasting, etching or grinding in accordance with the manufacturer's published installation instructions.

The concrete surface must be sloped to a minimum of $1/4:12$ for proper drainage in accordance with the requirements of the applicable code. The concrete surface must be properly cured prior to installation. Flashing must be provided in accordance with the applicable code.

4.3.2 Con-Dek Application: The fiberglass mat must be laid over the substrate with minimum and maximum overlaps of $1/4$ and $1/2$ inch (6.4 and 12.7 mm), respectively, and extend to the furthest edge of the deck. PD Resin must then be applied over the mat at a rate of 50 square feet per gallon (1.23 m²/L), and must be worked into the mat using a $1/2$ -inch (12.7 mm) nap roller or trowel. After the resin is allowed to dry for a minimum of eight hours, the surface is inspected and prepared for a second coat of PD Resin at a rate of approximately 100 square feet per gallon (2.46 m²/L). The fiberglass and resin coating must cure for a minimum of two to six hours before application of the third and sealer coats noted in Table 1A.

The desired third coat (GU-80-1 Top Coat or Custom Coat mixed with the GU-80-1 Liquid Admix) is applied, and the finished product is sealed with either the GS-88-1 or GS-99-1.

The temperature range for application is a minimum of 50°(10°C) and a maximum of 110°F (43°C), with ideal conditions being between 60°F (15.6°C) and 90°F (32.2°C) in high humidity. The coatings must not be applied in moist or inclement weather. Pot life and curing time vary with temperature and humidity. At 70°F (21.1°C), the maximum working life is one hour.

4.4 One-hour Fire-resistance-rated Construction:

4.4.1 Pli-Dek System: Pli-Dek systems identified in Table 1, having a minimum base coat thickness of $3/16$ inch (4.8 mm) and installed in accordance with this report over $5/8$ -inch-thick (15.9 mm) exterior-grade plywood, with minimum 2-by-8 solid sawn lumber joists spaced at 16 inches (406 mm) on center, and with all substrate joints blocked, or tongue-and-groove exterior-grade plywood, may be substituted for the double wood floor described in Assembly 13 of IBC Table 720.1(3). When installation is over 2-by-8 joists, the design bending stress assigned to the joists must be limited to 78 percent of the code-prescribed design values.

4.4.2 Con-Dek System: When the Con-Dek system is installed, as described in Section 4.3, over a concrete roof with a one-hour fire-rated resistance per IBC Table 720.1 (3), the Con-Dek system will not change the rating of the assembly.

4.5 Roof Covering Fire Classification:

4.5.1 Pli-Dek System: When installation is in accordance with this report, the assemblies have the fire classifications noted in Tables 1 and 2.

4.5.2 Con-Dek System: When the Con-Dek system is installed as described in Section 4.3 and Table 1A, at a maximum slope of $1/4$ inch per foot (2 percent slope), the system has a Class A roof classification.

4.6 Wind Resistance:

4.6.1 Pli-Dek System:

Installation of the Pli-Dek systems described in Table 1 is limited to areas where the maximum basic wind speed,

mean roof height and exposure comply with Tables 3 and 4.

Installation of the Pli-Dek systems described in Table 1 over $1/2$ -inch-thick (12.7 mm) plywood and the Pli-Dek system described in Table 2 is limited to areas where the maximum basic wind speed, mean roof height and exposure are as described in Footnote 1 of Table 1 and Footnote 4 of Table 2.

4.6.2 Con-Dek System:

The wind uplift resistance of the Con-Dek walking deck and roof covering system is limited to the wind uplift capacity of the concrete substrate on which the system is installed.

5.0 CONDITIONS OF USE

The Pli-Dek and Con-Dek Walking Deck and Roof Covering Systems described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The systems must be installed by applicators trained and approved by Pli-Dek Systems, Inc., in accordance with this report, the manufacturer's published installation instructions and the applicable code. If there is a conflict between the manufacturer's published installation instructions and this report, this report governs.
- 5.2 Installation of the Pli-Dek systems must be limited to use in areas where the wind speed does not exceed what is specified in Section 4.6.1. The plywood and its attachment to support framing must be adequate to resist the required wind load.
- 5.3 The concrete substrate on which the Con-Dek system is installed must be designed to resist the design wind pressures of the applicable code.
- 5.4 The products are manufactured for Pli-Dek Systems, Inc. at manufacturing locations identified in the approved quality manual, under a quality control program with inspections by RADCO (AA-650).

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Walking Decks (AC39), dated April 2011 (editorially corrected August 2011).
- 6.2 Report of small-scale fire tests in accordance with ASTM E119.
- 6.3 Report of wind uplift testing in accordance with Factory Mutual 1-52 for the Pli-Dek system.

7.0 IDENTIFICATION

Each component container is identified with a permanent label bearing the report holder's name (Pli-Dek Systems, Inc.) and address, the product designation, the lot number, the name of the inspection agency (RADCO) and the evaluation report number (ESR-2097). The label includes the one-year shelf life and the date of manufacture. Rolls of Pli-Dek Seam Paper are identified with the product name (PD Seam Paper) and the Pli-Dek Systems, Inc. name.

8.0 OTHER CODES

In addition to the codes referenced in Section 1.0, the products described in this report were evaluated for compliance with the requirements of the 1997 *Uniform Building Code*[™] (UBC). The products comply with the (UBC) as described in Sections 2.0 through 7.0, but with revisions to Sections 3.1.1.1, 4.4.1 and 6.2 as follows:

- **3.1.1.1 Substrate:** Exterior-grade plywood must comply with UBC Standard 23-2 or 23-3. Minimum thickness is specified in Tables 1 and 2 of this report.
- **4.4.1 Pli-Dek System:** Pli-Dek systems identified in Table 1, having a minimum base-coat thickness of $\frac{3}{16}$ inch (4.8 mm) and installed in accordance with this report over $\frac{5}{8}$ -inch-thick (15.9 mm) exterior-grade plywood, with minimum 2-by-8 solid sawn lumber joists spaced at 16 inches (406 mm) on center, and with all

substrate joints blocked, or tongue-and-groove exterior-grade plywood, may be substituted for the double wood floor described in Assembly 13 of UBC Table 7-C. When installation is over 2-by-8 joists, the design bending stress assigned to the joists must be limited to 78 percent of the code-prescribed design values.

- **6.2** Report of small-scale fire tests in accordance with UBC Standard 7-1.

TABLE 1—PLI-DEK CLASS A WALKING DECK AND ROOF COVERING SYSTEMS^{1,2,3}

SYSTEM	SUBSTRATE ⁴	MAXIMUM DECK SLOPE	BASE COAT	INTERMEDIATE COAT	THIRD COAT	SEALER COAT	MINIMUM BASE COAT THICKNESS (inch)
Pli-Dek K—Knock Down	$\frac{5}{8}$ -inch-thick plywood	$\frac{1}{4}$:12	GU-80-1 Gray Base applied at 30 sq. ft. per bag mixture	GU-80-1 Top Coat applied at 100 sq. ft. per bag mixture	—	GS-88-1 applied at 100 sq. ft. per gal.	$\frac{3}{16}$
Pli-Dek S—Smooth	$\frac{5}{8}$ -inch-thick plywood	$\frac{1}{4}$:12	GU-80-1 Gray Base applied at 30 sq. ft. per bag mixture	GU-80-1 Top Coat applied at 110 sq. ft. per bag mixture	—	GS-88-1 applied at 100 sq. ft. per gal.	$\frac{3}{16}$
Pli-Dek C—Polyacrylic Sand	$\frac{5}{8}$ -inch-thick plywood	$\frac{1}{4}$:12	GU-80-1 Gray Base applied at 30 sq. ft. per bag mixture	GU-80-1 Gray Base applied at 100 sq. ft. per bag mixture; with No. 16 silica sand broadcast over the entire area at 100 lbs. per 300 sq. ft.	—	GS-88-1 applied at 100 sq. ft. per gal.	$\frac{3}{16}$
Pli-Dek CF—Custom Finish	$\frac{5}{8}$ -inch-thick plywood	$\frac{1}{4}$:12	GU-80-1 Gray Base applied at 30 sq. ft. per bag mixture	GU-80-1 Custom Top Coat applied at 120 sq. ft. per bag mixture	GU-80-1 Custom Top Coat applied at 150 sq. ft. per bag mixture	GS-99-1 applied at 200 sq. ft. per gal.	$\frac{3}{16}$
Pli-Dek B—Sand Finish	$\frac{5}{8}$ -inch-thick plywood	$\frac{1}{4}$:12	GU-80-1 Gray Base applied at 30 sq. ft. per bag mixture	PD Resin applied at 75 sq. ft. per gallon; with No. 16 silica sand broadcast over the entire area at 100 lbs. per 300 sq. ft.	—	GS-88-1 applied at 100 sq. ft. per gal.	$\frac{3}{16}$
Pli-Dek U—Underlayment for Ceramic Tile	$\frac{5}{8}$ -inch-thick plywood	$\frac{1}{4}$:12	GU-80-1 Gray Base applied at 30 sq. ft. per bag mixture	PD Resin applied at 100 sq. ft. per gal.	—	—	$\frac{3}{16}$

For **SI**: 1 inch = 25.4 mm, 1 ft² = 0.0920 m², 1 gallon = 3.785 L, 1 pound = 0.45 kg.

¹When applied over $\frac{1}{2}$ -inch-thick plywood at any slope, systems provide a Class B roof covering fire classification and are limited to areas subject to a maximum 3-second-gust basic wind speed of 100 mph (161 km/h) under the IBC and IRC, or a maximum basic wind speed of 80 mph (129 km/h) under the UBC, on structures a maximum of 40 feet (12192 mm) in height in Exposure B areas.

²Optional fiberglass mat and resin coating may be applied over the base coat as described in Section 4.2.3 of this report.

³Minimum slope is $\frac{1}{4}$:12.

⁴Substrate thickness is minimum thickness.

TABLE 1A—CON-DEK CLASS A WALKING DECK AND ROOF COVERING SYSTEM¹

SYSTEM	SUBSTRATE	MAXIMUM DECK SLOPE	BASE COAT	INTERMEDIATE COAT	THIRD COAT	SEALER COAT
Con-Dek System	Concrete ²	$\frac{1}{4}$:12	PD Resin applied to $\frac{3}{4}$ oz. fiberglass mat at a rate of 50 sq. ft per gal	PD Resin applied at 100 sq. ft. per gal.	GU-80-1 Top Coat applied at 175 sq. ft. per bag mixture or Custom Top Coat applied at 175 sq. ft. per bag mixture	GS-88-1 applied at 100 sq. ft. per gal. or GS-99-1 applied at 200 sq. ft. per gal.

For **SI**: 1 inch = 25.4 mm, 1 ft² = 0.0920 m², 1 gallon = 3.785L.

¹Minimum slope is $\frac{1}{4}$:12.

²Concrete substrate must comply with the applicable code and have a minimum compressive strength of 2500 psi (17238 kPa).

TABLE 2—PLI-DEK CLASS B WALKING DECK AND ROOF COVERING SYSTEM^{1,4}

SYSTEM	SUBSTRATE ³	MAXIMUM DECK SLOPE	BASE COAT	INTERMEDIATE COAT	SEALER COAT	MINIMUM BASE COAT THICKNESS (inch)
PLI-DEK T—Troweled Pebbles and Epoxy	1/2-inch-thick plywood	5:12	GU-80-1 Gray Base applied at 35 sq. ft. per bag mixture	PD Resin applied at 80 sq. ft. per gal.	3/4 gallon of PD Epoxy thoroughly mixed with 100 lbs. of selected aggregate ² and troweled over a 30-square-foot area	3/16

For SI: 1 inch = 25.4 mm, 1 ft² = 0.0920 m², 1 gallon = 3.785 L, 1 pound = 0.45 kg.

¹Minimum slope is 1/4:12.

²Aggregate is specified in Section 3.1.1.14 of this report.

³Substrate thickness is minimum thickness.

⁴Installation is limited to areas subject to a maximum 3-second-gust basic wind speed of 100 mph (161 km/h) under the IBC and IRC, or a maximum basic wind speed of 80 mph (129 km/h) under the UBC, on structures a maximum of 40 feet (12192 mm) in height in Exposure B areas.

TABLE 3—MAXIMUM ALLOWABLE BASIC WIND SPEED FOR PLI-DEK SYSTEMS UNDER THE IBC AND IRC^{1,2,3,4}

MEAN ROOF HEIGHT OF BUILDING (feet)	Zone 1		Zone 2		Zone 3	
	Exposure B	Exposure C	Exposure B	Exposure C	Exposure B	Exposure C
	V _{3-sec}	V _{3-sec}	V _{3-sec}	V _{3-sec}	V _{3-sec}	V _{3-sec}
0-15	170	170	150	140	120	110
20	170	170	150	130	120	100
30	170	160	150	130	120	100
40	170	150	150	120	110	100
60	170	140	140	120	110	90

For SI: 1 ft = 304.8 mm; 1 ft² = 0.0920 m²; 1 mph = 1.6 kph.

¹The values are based on roofs with slopes not exceeding 7 degrees from horizontal, and the following conditions:

- I_w = 1.0
- GC_p = 2.8 for Zone 3 (with or without overhang; 10-square-foot effective wind area)
- GC_p = 1.8 for Zone 2 (with or without overhang; 10-square-foot effective wind area)
- GC_p = 1.0 for Zone 1 (without overhang; 10-square-foot effective wind area)
- GC_{pi} = 0.18
- V_{3-sec} = Wind speed, 3-second gust
- IBC Figure 1609; IRC Figure R301.2(4)

²Zones 1, 2 and 3 are as described in Figure 6-11B of ASCE 7 (IBC) and IRC Figure R301.2(7).

³Topographic effects, located in any exposure category, must be designed in accordance with Section 6.5.7 of ASCE 7 (IBC) or IRC Section R301.2.1.4 in the 2006 IRC or R301.2.1.5 of the 2009 IRC, as applicable.

⁴Wind speed in miles/hour.

TABLE 4—MAXIMUM ALLOWABLE BASIC WIND SPEED FOR PLI-DEK SYSTEMS UNDER THE UBC^{1,2}

MEAN ROOF HEIGHT OF BUILDING (feet)	IN AREA OF DISCONTINUITIES ³		IN AREA OF DISCONTINUITIES ⁴	
	Exposure B	Exposure C	Exposure B	Exposure C
	V _{fm}	V _{fm}	V _{fm}	V _{fm}
0-15	110	90	110	110
20	110	90	110	110
30	110	90	110	100
40	100	80	110	100
60	100	80	110	100

For SI: 1 ft = 304.8 mm 1 mph = 1.6 kph.

¹Use in areas with overhangs is outside the scope of this report.

²V_{fm} = Wind speed, in miles per hour, based on fastest mile.

³The values are based on an Importance Factor, I_w = 1.0, a C_g Factor = 2.6 per UBC Table 16-H, and UBC Figure 16-1.

⁴The values are based on an Importance Factor, I_w = 1.0, a C_g Factor = 1.8 per UBC Table 16-H, and UBC Figure 16-1.

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EVALUATION SUBJECT:

PLI-DEK AND CON-DEK WALKING DECK AND ROOF COVERING SYSTEMS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Pli-Dek and Con-Dek Walking Deck and Roof Covering Systems, recognized in ICC-ES master evaluation report ESR-2097, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2010 *Florida Building Code—Building*
- 2010 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The Pli-Dek and Con-Dek Walking Deck and Roof Covering Systems, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2097, comply with the *2010 Florida Building Code—Building* and the *2010 Florida Building Code—Residential*, provided the design and installation are in accordance with the *International Building Code*® (IBC) provisions noted in the master report and the following conditions apply:

1. The design wind speeds, $V_{3\text{-sec}}$, for use in Tables 1 through 3 of the master report must be based on the nominal design speed, V_{asd} . V_{asd} is converted from the strength design speeds, V_{ult} , as allowed in Section 1609.3.1 of the *2010 Florida Building Code—Building* or Section R301.2.1.3 of the *2010 Florida Building Code—Residential*, as applicable. V_{ult} is determined from Figures 1609A, 1609B and 1609C of the *2010 Florida Building Code—Building* and Figure R301.2(4) of the *2010 Florida Building Code—Residential*, as applicable.
2. Zones 1, 2 and 3 as shown in Table 3 of the master report are as described in Figure 30.4-2A of ASCE 7.
3. Topographic effects, located in any exposure category, must be designed in accordance with Section 26.8 of ASCE 7.

Use of the Pli-Dek and Con-Dek Walking Deck and Roof Covering Systems for compliance with the High-Velocity Hurricane Zone provisions of the *2010 Florida Building Code—Building* and the *2010 Florida Building Code—Residential* has not been evaluated, and is outside the scope of this supplemental report.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report reissued on August 1, 2012.