



## ICC-ES Listing Report ESL-1497

Reissued November 2024

This listing is subject to renewal in November 2025.

**CSI:** DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION  
Section: 07 18 13—Pedestrian Traffic Coatings

### Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

**Product:** PLI-DEK AND CON-DEK WALKING DECK AND ROOF COVERING SYSTEMS

**Evaluation:** The Pli-Dek systems, described in Tables 1 and 3, are polymer-modified, cementitious walking deck and roof covering systems that consists of a plywood substrate covered with expanded metal lath; a polymer-modified cementitious basecoat; an optional reinforcing fabric layer; and intermediate and sealer coats. The Pli-Dek systems are produced at jobsites and consists of the following components:

- **Metal Lath:** Metal lath is a minimum 2.5-pound-per-square-yard (1.36 kg/m<sup>2</sup>), hot-dipped galvanized lath, complying with ASTM C847.
- **Staples:** Staples are No.16 gage, <sup>7</sup>/<sub>8</sub>-inch-crown (22.2 mm), <sup>5</sup>/<sub>8</sub>-inch-long (15.9 mm), corrosion-resistant staples complying with ASTM F1667.
- **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 the Pli-Dek systems.
- **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 the Pli-Dek systems.
- **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 (4.7L) 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 described in Table 1.
- **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 the Pli-Dek systems.
- **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 epoxy is used as a sealer coat in the Pli-Dek T system described in Table 3.
- **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 the Pli-Dek systems.
- **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 the Pli-Dek systems.

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.

- **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 described in Table 1. The resin is supplied in 5-gallon (18.9 L) containers.
- **Fiberglass Mat:** The fiberglass mat is a multidirectional chopped strand mat weighing 0.75 ounce per square foot (0.23 kg/m<sup>2</sup>).
- **Pli-Dek Seam Paper:** Pli-Dek Seam Paper is a 2-inch-wide (51 mm), water-resistant, reinforced, asphalt laminated Kraft paper material used to cover plywood joints.
- **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).

The Con-Dek system, described in Table 2, is a fiberglass fabric reinforced cementitious walking deck and roof covering system that consists of a fiberglass mat, a liquid polymer resin, polymer-modified cementitious coats, and sealer coats applied directly to a concrete substrate. The Con-Dek system is produced at jobsites and consists of the following components:

- **Pli-Dek GU-80-1 Top Coat:** A proprietary mixture of Portland cement and silica sand packaged in 46-pound (20.9kg) bags that is mixed on-site with the GU-80-1 Liquid Admix, at a ratio of 1.25 gallons (4.7L) of GU-80-1 Liquid Admix for each 46-pound (20.9kg) bag of GU-80-1 Top Coat, in accordance with the manufacturer's instructions. The mixture is used as a component of the third coat of the Con-Dek system.
- **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 third coat of the Con-Dek system.
- **Pli-Dek GS-88-1:** A proprietary water-based acrylic mixture available in 5-gallon (18.9 L) containers. The mixture is used as a sealer coat for the Con-Dek system.
- **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 the Con-Dek system.
- **PD Resin:** PD Resin is a liquid polymer bonding resin used as the base and intermediate coats for the Con-Dek system described in Table 2. The resin is supplied in 5-gallon (18.9 L) containers.
- **Fiberglass Mat:** The fiberglass mat is a multidirectional chopped strand mat weighing 0.75 ounce per square foot (0.23 kg/m<sup>2</sup>).
- **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).

The Pli-Dek and Con-Dek systems were evaluated when tested in accordance with the following standard:

- ASTM E108 (-17 and-16), Standard Test Methods for Fire Tests of Roof Coverings, ASTM International.

#### Findings:

The Pli-Dek systems, when applied as described in Table 1 of this report on a plywood deck having a maximum slope of 1/4 inch to a horizontal foot (2.1 percent slope), have a Class A roof classification. The Con-Dek system, when applied as described in Table 2 of this report on a concrete deck having a maximum slope of 1/4 inch to a horizontal foot (2.1 percent slope), has a Class A roof classification. The Pli-Dek T system, when applied as described in Table 3 of this report with aggregate on a plywood deck having a maximum slope of 5 inch to a horizontal foot (41.7 percent slope), has a Class B roof classification. All systems are based on testing in accordance with ASTM E108, as referenced in the applicable sections of the following code editions below:

- 2021 and 2018 *International Building Code*®  
Applicable Section: 1505.1
- 2021 and 2018 *International Residential Code*®  
Applicable Section: R902.1

#### Identification:

1. All components of the Pli-Dek and Con-Dek systems must be identified with a label bearing the Pli-Dek LLC name and address; the product name, lot number, the one-year shelf life and date of manufacture, if applicable; the ICC-ES evaluation report number (ESR-2097) and / or ICC-ES listing number (ESL-1497), and when applicable, the ICC-ES listing mark.
2. The report holder's contact information is the following:

PLI-DEK LLC  
150 DASCOMB ROAD  
ANDOVER, MASSACHUSETTS 01810  
(978) 623-9980  
[www.plidek.com](http://www.plidek.com)

**Installation:** The systems must be installed in accordance with the Pli-Dek published installation instructions and applicable codes.

**Conditions of listing:**

1. The listing report addresses only conformance with the standards and code sections noted above.
2. Approval of the product's use is the sole responsibility of the local code official.
3. The listing report applies only to the materials tested and as submitted for review by ICC-ES.
4. The products are manufactured at the locations identified in the approved quality manual, under a quality control program with inspections by ICC-ES.

**TABLE 1—PLI-DEK CLASS A WALKING DECK AND ROOF COVERING SYSTEMS<sup>1,2,3</sup>**

SYSTEM	SUBSTRATE <sup>4</sup>	MAXIMUM DECK SLOPE	BASE COAT	INTERMEDIATE COAT	THIRD COAT	SEALER COAT	MINIMUM BASE COAT THICKNESS (inch)
Pli-Dek K— Knock Down	<sup>5</sup> / <sub>8</sub> -inch-thick plywood	<sup>1</sup> / <sub>4</sub> :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.	<sup>3</sup> / <sub>16</sub>
Pli-Dek S— Smooth	<sup>5</sup> / <sub>8</sub> -inch-thick plywood	<sup>1</sup> / <sub>4</sub> :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.	<sup>3</sup> / <sub>16</sub>
Pli-Dek C— Polyacrylic Sand	<sup>5</sup> / <sub>8</sub> -inch-thick plywood	<sup>1</sup> / <sub>4</sub> :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.	<sup>3</sup> / <sub>16</sub>
Pli-Dek CF— Custom Finish	<sup>5</sup> / <sub>8</sub> -inch-thick plywood	<sup>1</sup> / <sub>4</sub> :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.	<sup>3</sup> / <sub>16</sub>
Pli-Dek B— Sand Finish	<sup>5</sup> / <sub>8</sub> -inch-thick plywood	<sup>1</sup> / <sub>4</sub> :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.	<sup>3</sup> / <sub>16</sub>
Pli-Dek U— Underlayment for Ceramic Tile	<sup>5</sup> / <sub>8</sub> -inch-thick plywood	<sup>1</sup> / <sub>4</sub> :12	GU-80-1 Gray Base applied at 30 sq. ft. per bag mixture	PD Resin applied at 100 sq. ft. per gal.	—	—	<sup>3</sup> / <sub>16</sub>

For **SI**: 1 inch = 25.4 mm, 1 ft<sup>2</sup> = 0.0920 m<sup>2</sup>, 1 gallon = 3.785 L, 1 pound = 0.45 kg.

<sup>1</sup>When applied over <sup>1</sup>/<sub>2</sub>-inch-thick plywood at any slope, systems provide a Class B roof covering fire classification.

<sup>2</sup>Optional fiberglass mat and resin coating may be applied over the base coat as described in Section 4.2.3 of ESR-2097.

<sup>3</sup>Minimum slope is <sup>1</sup>/<sub>4</sub>:12.

<sup>4</sup>Exterior-grade plywood must comply with U.S. DOC PS-1 or PS-2 in the minimum plywood thickness specified for each system.

**TABLE 2—CON-DEK CLASS A WALKING DECK AND ROOF COVERING SYSTEM<sup>1</sup>**

SYSTEM	SUBSTRATE	MAXIMUM DECK SLOPE	BASE COAT	INTERMEDIATE COAT	THIRD COAT	SEALER COAT
Con-Dek System	Concrete <sup>2</sup>	1/4:12	PD Resin applied to 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 ft<sup>2</sup> = 0.0920 m<sup>2</sup>, 1 gallon = 3.785l.

<sup>1</sup>Minimum slope is 1/4:12.

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

**TABLE 3—PLI-DEK CLASS B WALKING DECK AND ROOF COVERING SYSTEM<sup>1</sup>**

SYSTEM	SUBSTRATE <sup>3</sup>	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 <sup>2</sup> and troweled over a 30-square-foot area	3/16

For **SI**: 1 inch = 25.4 mm, 1 ft<sup>2</sup> = 0.0920 m<sup>2</sup>, 1 gallon = 3.785 L, 1 pound = 0.45 kg.

<sup>1</sup>Minimum slope is 1/4:12.

<sup>2</sup>Aggregate is specified as 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).

<sup>3</sup>Exterior-grade plywood must comply with U.S. DOC PS-1 or PS-2 in the minimum plywood thickness specified for each system.