

ICC-ES Evaluation Report


ESR-4292

Reissued August 2024

Subject to renewal August 2025

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.

Copyright © 2024 ICC Evaluation Service, LLC. All rights reserved.

<p>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</p> <p>Section: 07 18 13— Pedestrian Traffic Coatings</p> <p>Section: 07 54 00— Thermoplastic Membrane Roofing</p> <p>Section: 07 54 19— Polyvinyl-Chloride Roofing</p>	<p>REPORT HOLDER: DEC-K-ING</p>	<p>EVALUATION SUBJECT: DEC-K-ING ROOFSEAL</p>	
--	--	--	---

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012, 2009 and 2006 [International Building Code® \(IBC\)](#)
- 2018, 2015, 2012, 2009 and 2006 [International Residential Code® \(IRC\)](#)

Properties evaluated:

- Fire classification
- Durability
- Wind resistance
- Impact resistance

2.0 USES

DEC-K-ING Roofseal is a walking deck and roof covering system for use directly over plywood or concrete substrates. When installed in accordance with this report, the walking deck complies with IBC Section 1505 and IRC Section R902 as a Class A or Class C roof covering.

3.0 DESCRIPTION

3.1 General:

The DEC-K-ING Roofseal system consists of reinforced PVC membrane, deck adhesive, leveling compound, seam sealer and PVC coated galvanized metal flashing.

3.2 Material:

3.2.1 Roofseal Membrane: The DEC-K-ING Roofseal membrane consists of a polyester-reinforced polyvinyl chloride (PVC) sheet nominally 60-mil thick [0.060 inch (1.55 mm)] and weighing 90 ounces per square yard (2.6 kg/m²), complying with ASTM D4434, Type III. The top surface of the membrane is coated with an acrylic finish and is embossed with a “pebble” pattern. The membrane is available in rolls measuring 6 feet (1829 mm) wide by 75 feet (22 860 mm) long.

3.2.2 DEC-K-ING PVC-Coated Flashing: The flashing is No. 24 gage [nominally 0.024 inch (0.6 mm)], galvalume sheet steel, coated on one side with a PVC-laminated film. The steel is sheared and broken to form a deck-edge drip flashing and wall-edge flashing.

3.2.3 DEC-K-ING Adhesives:

3.2.3.1 DEC-K-ING Contact Adhesive No. 1667: DEC-K-ING Contact Adhesive No. 1667 is a solvent-based adhesive, supplied in 5-gallon (19 L) pails. The adhesive application ambient temperature range is 36°F to 97°F (2°C to 36°C). The adhesive shelf life is one year when stored in unopened containers and at temperature range between 32°F and 85°F (0°C and 29°C).

3.2.3.2 DEC-K-ING Latex Adhesive No. 390: DEC-K-ING Latex Adhesive No. 390 is a water-based, synthetic-polymer adhesive, stored in 5-gallon (19 L) pails. The latex adhesive is only used for plywood substrates. The adhesive application ambient temperature range is 54°F to 97°F (12°C to 36°C). Shelf life is one year when stored in unopened containers and at temperatures between 50°F and 85°F (10°C and 29°C).

3.2.4 DEC-K-ING Floor-leveling Compound: DEC-K-ING Floor-leveling Compound consist of a cement-based dry mix, an acrylic-latex bonding additive solution, and water mixed at a ratio of one part additive solution to 2.5 parts water by (volume) added to 1 lb (0.45 kg) of dry mix. The floor leveling compound application ambient temperature range is 32°F to 104°F (0°C to 40°C). The dry mix is supplied in 22 lb (10 kg) packages and has a shelf life of two years when stored in unopened containers and at temperatures between 32°F and 85°F (0°C and 29°C).

3.2.5 DEC-K-ING Liquid Chemical Seam Sealer: DEC-K-ING Liquid Chemical Seam Sealer is a clear chemical liquid adhesive made of a methyl-ethyl-ketone formulation, stored in 1-quart (946 mL) cans. The liquid seam sealer may be used in place of an electric hot air welder for seaming of the membrane. The sealer is applied to both the overlap and bottom membrane contact surfaces and a weight of 10 to 20 lbs (4.5 to 9.1 kgs) is applied for a minimum period of two hours. The sealer application ambient temperature range is 40°F to 104°F (4°C to 40°C). Shelf life of the sealer is one year from the date of manufacture when stored in unopened containers at temperatures above 32°F (0°C).

3.3 Substrates:

3.3.1 Plywood Substrates: Plywood substrates must be minimum ⁵/₈-inch thick (15.9 mm), exterior-grade plywood with tongue-and-groove edges or blocked edges and complying with U.S. Department of Commerce PS-1 or PS 2.

3.3.2 Concrete Substrate: Concrete substrates must comply with the requirements of the applicable code.

3.4 Impact Resistance:

The membrane described in this report meets the requirements for impact resistance in IBC Section 1504.7, based on testing in accordance with Section 4.6 of FM 4470.

4.0 INSTALLATION

4.1 General:

The DEC-K-ING Roofseal system must be installed in accordance with the report holder’s published installation instructions, the applicable code and this report. The report holder’s installation instructions and this report must be available on the jobsite at all times during installation. Installation is limited to when the weather is dry and the ambient temperature is above 54°F (12°C). Materials must not be applied if precipitation is occurring or expected.

If flashing other than the DEC-K-ING flashing specified in Section 3.2.2 is used, the flashing must comply with IBC Section 1503.2 or IRC Section R903.2, as applicable.

4.2 Preparation of Substrates:

Substrates must be structurally sound, clean, dry and free of dust and other material contamination at the time of application, and must have a minimum $1/4:12$ (2 percent) slope for drainage. The deck-edge drip flashing is fixed to the deck-edge perimeter using corrosion-resistant ring-shank nails, $3/4$ inch (19.1 mm) long, spaced at 3 inches (76 mm) on center. Each length of flashing must overlap the next by 2 inches (51 mm). Post flashings are fitted and fixed in place where required.

4.2.1 Plywood: Plywood must be installed in accordance with the applicable code. Any loose materials must be removed and all plywood seams, knot holes and uneven areas must be filled with DEC-K-ING Floor-leveling Compound in accordance with the report holder's published installation instructions.

4.2.2 Concrete: Surfaces must be clean and free of standing water. All holes, joints and cracks must be filled with DEC-K-ING Floor-leveling Compound.

4.3 Membrane Installation:

DEC-K-ING No. 1667 contact adhesive or No. 390 latex adhesive is applied to one-half of the DEC-K-ING Roofseal membrane at a time. The adhesive is applied over the entire deck substrate area, including the deck flashing described in Section 3.2.2, to within 1 inch (25 mm) of the deck edge. DEC-K-ING No. 1667 contact adhesive is applied to the back of the membrane and the deck substrate. No. 390 latex adhesive is applied to the deck substrate only. An adhesive tack time of 15 to 45 minutes must be provided. Once the adhesive on the membrane and substrate is tacky to the touch, the first half membrane is rolled onto the substrate using a rubber roller, working from the center of the membrane sheet outward, taking care not to leave wrinkles or air pockets. The same procedure is followed for the second half of the membrane. Following the initial application, the entire membrane is rolled using a 70-pound (32 kg) steel flooring roller to ensure complete contact with the substrate and the elimination of any air pockets. One inch (25 mm) of the membrane is allowed to overhang the deck edge, and 3 inches to 6 inches (76 mm to 152 mm) are allowed to flash up the wall surface.

4.4 Method of Repair:

The damaged area must be clean and dry, and all existing materials removed before a new piece of membrane is prepared and applied as described in Section 4.3 so that it overlaps the existing membrane by $3/4$ inch (19 mm).

4.5 Wind Resistance:

The maximum allowable wind resistance pressure of the DEC-K-ING Roofseal is limited by the capacity of the roof deck construction. The roof deck must be designed to withstand wind pressures in accordance with IBC Section 1609.5.1.

4.6 Roof Classification:

4.6.1 Class A Classification: When applied at a maximum slope of $1/4:12$ (2 percent) over concrete surfaces in accordance with this report, the DEC-K-ING Roofseal system has a Class A roof covering classification.

4.6.2 Class C Classification: When applied at a maximum slope of $1/4:12$ (2 percent) over $5/8$ -inch-thick (15.9 mm), exterior-grade plywood substrates with blocked edges or tongue-and-groove edges, the DEC-K-ING Roofseal system has a Class C roof covering classification.

5.0 CONDITIONS OF USE:

The DEC-K-ING ROOFSEAL system 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 Installation must comply with this report, the report holder's published installation instructions and the applicable code. If there is a conflict between the report holder's published installation instructions and this report, this report governs.
- 5.2 The deck and framing to which the roof covering is attached must be designed for the applicable components and cladding wind loads in accordance with the applicable code.
- 5.3 The membrane is manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the [ICC-ES Acceptance Criteria for Walking Decks \(AC39\)](#), dated June 2017 (editorially revised May 2018).
- 6.2 Data in accordance with the [ICC-ES Acceptance Criteria for Membrane Roofing Systems \(AC75\)](#), dated July 2010 (editorially revised March 2018).

7.0 IDENTIFICATION

7.1 Each roll of membrane is identified with the report holder's name (DEC-K-ING) and address, product name, shelf life, date of manufacture, and evaluation report number (ESR-4292).

Each container of adhesive, floor leveling compound and seam sealer is labeled with the report holder's name (DEC-K-ING) and address, product name, shelf life, and date of manufacture.

7.2 The report holder's contact information is the following:

DEC-K-ING

5250-185A STREET

SURREY, BRITISH COLUMBIA V3S 7A4

CANADA

(778) 571-3000

www.globaldecking.com

dave@dec-k-ing.com