

ICC-ES Evaluation Report

ESR-2091

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DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION

Section: 07 18 13—Pedestrian Traffic Coatings

REPORT HOLDER:

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EVALUATION SUBJECT:

LONDECK WALKING DECK SYSTEM

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

Properties evaluated:

- Durability
- Wind resistance

2.0 USES

The Londeck system is a walking deck system for use directly over concrete and plywood substrates as described in Section 3.2.4.

3.0 DESCRIPTION

3.1 General:

Londeck consists of a membrane, cementitious underlayment and deck adhesive.

3.2 Materials:

3.2.1 Membrane: Londeck sheeting is a three-layer laminated polyvinyl chloride (PVC) sheeting consisting of PVC resins, plasticizers, fillers and pigments. A flax and rayon cloth is laminated as backing. The membrane is nominally 0.080 inch thick [80 mils (2.0 mm)] and is available in rolls of varying size.

3.2.2 Lonseal 900: A cementitious underlayment composed of latex emulsion mixed with cementitious fillers at a rate of 50 pounds of filler per 1 gallon (6.0 kg/L) of latex emulsion. The cementitious filler has a shelf life of twelve months when unopened and stored at temperatures between 65°F and 85°F (18°C and 29°C). The latex emulsion has a shelf life of twelve months when unopened and stored at temperatures of 65°F (18°C) or less.

3.2.3 Lonseal 200: A white-colored, acrylic liquid adhesive with a shelf life of twelve months when unopened and stored at temperatures between 65°F and 85°F (18°C and 29°C).

3.2.4 Substrates: The substrate over which the walking deck system is applied must be one of the following:

3.2.4.1 Plywood: Minimum ³/₄-inch-thick (19.1 mm) exterior-grade with tongue-and-groove edges, complying with U.S. Department of Commerce Product Standard PS-1.

3.2.4.2 Concrete: Concrete substrates complying with the requirements of the applicable code.

4.0 INSTALLATION

4.1 General:

Installation of the Londeck system must be in accordance with the manufacturer's published installation instructions, the applicable code and this report. The manufacturer's installation instructions must be available on the jobsite during application. Installation is limited to conditions when the weather is dry and the ambient air temperatures are between 65°F and 85°F (19°C and 29°C) during and for 48 hours before and after application. Materials must not be applied if precipitation is occurring or expected.

4.2 Preparation of Substrates:

4.2.1 Plywood: Plywood must be applied to framing in accordance with the requirements of the applicable code. All edges must be blocked. All penetrations through and terminations of the sheathing must be protected with flashing in accordance with the requirements of the applicable code and the manufacturer's published installation instructions.

4.2.2 Concrete: Surfaces must be clean and free of standing water. All holes, joints and cracks must be pointed flush with portland cement mortar and all high spots cut or ground off to provide a smooth, even surface. Any foreign material such as paint, grease or oil must be removed by mechanical means.

4.3 Membrane Installation:

A layer of Lonseal No. 900 is trowel-applied to the substrate to a uniform thickness of ³/₁₆ inch (4.8 mm). Once cured, the Lonseal No. 900 underlayment is coated with Lonseal No. 200 adhesive. The adhesive is spread with a serrated trowel with ¹/₁₆-inch-deep (1.6 mm) notches. The minimum adhesive coverage rate is 200 square feet per gallon (4.9 m²/L) and the adhesive is allowed to set until tacky. The Londeck sheeting is placed on the adhesive and rolled to remove air bubbles using a 75- to 100-pound (34 to 45 kg) roller. The Londeck

sheeting seams are overlapped a minimum of 1¹/₂ inches (38 mm) at edges and ends. Exposed edges, posts and trim strips are sealed with sealant.

4.4 Method of Repair:

The damaged section is cut with a metal straightedge and sharp knife. The damaged area is softened with a heat gun and the cut area removed. The underlying substrate is cleaned and Lonseal No. 200 adhesive is applied with a notched trowel and allowed to become tacky. A piece of Londeck sheeting of the same color (and dye lot, if available) and texture is placed over the damaged section with a minimum ³/₄-inch (19.1 mm) overlap at all edges. The patch is set in the adhesive with pressure. The patch is heated in the same manner as an overlap seam. When substrate damage occurs, the retention of the strength properties of the system must be investigated to the satisfaction of the code official.

4.5 Wind Resistance:

The deck construction over which the fully bonded coating is installed must be designed to resist the minimum design wind pressures set forth in the applicable code.

5.0 CONDITIONS OF USE

The Londeck walking deck 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 manufacturer's published installation instructions and the applicable code. If there is a conflict between the installation instructions and this report, this report governs.
- 5.2 The deck on which the walking deck system is installed must be designed to resist the design wind pressures of the applicable code.
- 5.3 Use of the system in roofing applications is outside the scope of this report.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Walking Decks (AC39), dated March 2010.

7.0 IDENTIFICATION

Each roll of membrane is identified with the Lonseal, Inc., name and address, the evaluation report number (ESR-2091) and a permanent serialized label. The adhesives and underlayment materials are identified with the Lonseal, Inc., name and address, the product designation, batch number keyed to the date of manufacture, and the product expiration date.