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ICC-ES Evaluation Report

ESR-4054

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Issued 07/2017
This report is subject to renewal 07/2018.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 30 05—ROOFING FELT AND UNDERLAYMENT

REPORT HOLDER:

SENTRY BUILDING INNOVATIONS

**1209 ORANGE STREET
WILMINGTON NEW CASTLE, DELAWARE 19801**

EVALUATION SUBJECT:

LAPLOCK™ PSU UNDERLAYMENT



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1209 ORANGE STREET
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www.roofnado.com

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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012, and 2009 *International Residential Code*® (IRC)

Properties evaluated:

- Physical properties
- Water resistance
- Ice barrier

2.0 USES

2.1 Roof Underlayment:

The LapLock™ PSU Underlayment is a self-adhering membrane that is used as an alternative to ASTM D226, Type I and Type II, roofing underlayment specified in IBC Chapter 15 and IRC Chapter 9.

2.2 Ice Barrier:

The LapLock™ PSU Underlayment is a self-adhering membrane that is used where an ice barrier is specified in IBC Chapter 15 and IRC Chapter 9.

3.0 DESCRIPTION

LapLock™ PSU Underlayment is a multilayered self-adhering membrane composed of a synthetic top facer sheet and a polymer modified bitumen and a release rfilm on the bottom that is removed prior to attachment to plywood or oriented strand board (OSB) sheathing. The membrane is nominally 60 mils thick [0.060 inch (1.5 mm)], and is available in various sizes and colors. Standard roll size is 36 inches (914 mm) wide by 67 feet (20.7 m) long. Custom lengths and width are available.

4.0 INSTALLATION

4.1 General:

Installation of the underlayment must comply with this report and the report's published installation instructions. The report holder's published installation instructions must be available at the jobsite at all times during the installation.

Prior to application of the membrane, the deck surface must be dry, free of frost, dust and dirt, loose fasteners and other protrusions. Damaged sheathing must be replaced.

Installation is limited to plywood and orienated strand board (OSB) substrates. The membrane must be applied only when the ambient air and substrate temperatures are at or above 40°F (4.4°C). The membrane is cut into 10- to 15-foot (3.05 to 4.57 m) lengths and rerolled. The release film is peeled back approximately 1 to 2 feet (0.3 to 0.6 m) and the membrane aligned with the lower edge of the roof and set in place with the printed side facing up. The remainder of the membrane is applied directly to the roof deck by removing the release film and firmly pressing the membrane in place. Alternatively, starting with a full roll of membrane, an approximately 3- to 6-foot(1-2 m) piece of membrane is unrolled while the release liner is left in place. The membrane must be aligned and rolled in the intended direction of membrane application. The release liner on the bottom of the roll is cut carefully in the cross direction without cutting of the membrane. Approximately 6 inches (152 mm) of the release liner in the opposite direction of the intended membrane application must be peeled back, exposing the adhesive. The roll is pulled along the roof deck, leaving the applied membrane on the deck. The membrane is pressed to the roof deck by applying hand pressure followed with a 40 lb (18.2 kg) or heavier pressure roller to smooth and secure the membrane including the overlaps that must be rolled firmly with a seam roller.

Subsequent courses of membrane are applied parallel to the eave, from the lower edge of the roof upwards, in a shingle-lap manner. The vertical (end) seams must be overlapped a minimum of 6 inches (152 mm). Horizontal (side) seams must be overlapped a minimum of 3 inches (76 mm), and must run with the flow of water in a shingling effect. The membrane must be installed in sufficient courses to extend up the roof a minimum distance of 24 inches (610 mm) beyond the interior of the exterior wall. The underlayment in the field of the roof must overlap the membrane.

If the membrane becomes misaligned, the roll must be cut and restarted. The membrane must be pressed firmly

into place, from the center to edge. After application, the membrane must be inspected and any defects repaired. "Fish mouths" must be slit, pressed flat, and covered with a round patch of membrane of sufficient width and length to overlap each side and end of the slit a minimum of 6 inches (152 mm). Flashing around protrusions or metal drip edges must be over the membrane to prevent water backup.

Installation of the roof covering can proceed immediately following application of the membrane. The membrane must be covered by an approved roof covering as soon as possible. For reroofing applications, the same procedures apply after removal of the old roof covering and roofing felts to expose the plywood roof deck.

4.2 Roof Underlayment:

LapLock™ PSU Underlayment must be installed as prescribed in IBC Chapter 15 or IRC Chapter 9 where an ASTM D226, Type I or Type II, underlayment is required.

4.3 Ice Barrier:

When used as an ice barrier, the membrane must be installed as prescribed in IBC Chapter 15 and IRC Chapter 9 where an ice barrier is required. The membrane must be installed in sufficient courses to extend up the roof for a minimum distance of 24 inches (610 mm) inside the exterior wall line of the building. When used as roof underlayment in the field of the roof, the underlayment must overlap the ice barrier.

4.4 Flashing:

Flashing must be in accordance with the applicable code. Flashing around protrusions must be over the lower course of the underlayment to prevent water backup. When used, metal drip edges must be installed beneath the underlayment at the eaves and over the underlayment at rakes.

5.0 CONDITIONS OF USE

The LapLock™ PSU Underlayment underlayment 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 and the report holder's published installation instructions. In the

event of a conflict between the report holder's published installation instructions and this report, this report governs.

5.2 Installation is limited to use on plywood and oriented strand board (OSB) substrates on structures located in areas where nonclassified roof coverings are permitted.

5.3 Installation is limited to roofs having a slope of 2:12 (16.67 percent slope) or greater.

5.4 Installation is limited to use with roof coverings that do not utilize hot asphalt or coal-tar pitch.

5.5 Installation is limited to use with roof coverings that are mechanically fastened through the underlayment to the sheathing or rafters.

5.6 Installation is limited to roofs having attics or rafter spaces that are ventilated, in accordance with the requirements of the applicable code.

5.7 The underlayment and ice barrier must be installed only when the ambient air and substrate temperature are at or above 40°F (4.4°C).

5.8 The membrane is manufactured under a quality-control program with inspections by ICC Evaluation Service, LLC.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Roof Underlayments (AC188), dated February 2012 (editorially revised December 2015).

6.2 Data in accordance with the ICC-ES Acceptance Criteria for Roof Underlayment for Use as Ice Barriers (AC48), dated February 2012 (editorially revised December 2015).

7.0 IDENTIFICATION

The membrane is identified by a label on the packaging of each roll bearing the company name (Sentry Building Innovations), the product name (LapLock™ PSU Underlayment), and the evaluation report number (ESR-4054).