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# ICC-ES Report

# ESR-4055

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**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:**

**ROOFNADO™ ANCHORDECK™, ROOFNADO™ STORMTREAD™, ROOFNADO™  
SHINGLELOCK™, AND ROOFNADO™ STORMTREAD™MW  
SYNTHETIC ROOF UNDERLAYMENTS**



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# ICC-ES Evaluation Report

**ESR-4055**

Issued March 2017

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**Section: 07 30 05—Roofing Felt and Underlayment**

**REPORT HOLDER:**

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WILMINGTON, NEW CASTLE, DELAWARE 19801  
[www.sentrybuilding.com](http://www.sentrybuilding.com)  
[www.roofnado.com](http://www.roofnado.com)

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**ROOFNADO™ ANCHORDECK™, ROOFNADO™ STORMTREAD™, ROOFNADO™ SHINGLELOCK™, AND ROOFNADO™ STORMTREAD™MW SYNTHETIC ROOF UNDERLAYMENTS**

## 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
- Fire classification

## 2.0 USES

Roofnado™ AnchorDeck™, Roofnado™ StormTread™, Roofnado™ ShingleLock™, and Roofnado™ StormTread™MW synthetic roof underlayments are alternatives to the ASTM D226, Type I and Type II, roof underlayment specified in Chapter 15 of the IBC and Chapter 9 of the IRC. The underlayments are also used as components of classified roofing assemblies when installed as described in this report.

## 3.0 DESCRIPTION

The Roofnado™ AnchorDeck™, Roofnado™ StormTread™, Roofnado™ ShingleLock™, and Roofnado™ StormTread™MW roof underlayments consist of a woven polypropylene base with a layer of nonwoven polyolefin sheet along with a polymer coating on the back side. The underlayments have nominal weights as follows:

- AnchorDeck™ underlayment: 2.25 lbs/100 ft<sup>2</sup> (110 g/m<sup>2</sup>)

- StormTread™ underlayment: 3.80 lbs/100 ft<sup>2</sup> (185 g/m<sup>2</sup>)
- ShingleLock™ underlayment: 3.80 lbs/100 ft<sup>2</sup> (185 g/m<sup>2</sup>)
- StormTread™MW underlayment: 3.17 lbs/100 ft<sup>2</sup> (155 g/m<sup>2</sup>)

The underlayments are produced in 48-inch-wide-by-250-foot-long (1219 mm by 76.2 m) rolls. Custom widths, lengths and colors are available.

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

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

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

Installation of an approved roof covering can proceed immediately following application of the roofing underlayment. The underlayment is to be covered by the roof covering within the time set forth in the report holder's published installation instructions. For reroofing applications, the same procedures apply after removal of the existing roof covering and roofing felts to expose the roof deck.

### 4.2 Applications:

The underlayment must be installed in accordance with Chapter 15 of the IBC or Chapter 9 of the IRC, and must be laid-printed side up horizontally (parallel to the eave) starting at the lower edge of the roof, with 3-inch (76 mm) horizontal (head) laps and 6-inch (152 mm) vertical (end) laps. Overlaps run with the flow of water in a shingling manner.

The underlayment must be fastened to the roof deck using minimum No. 12 gage [0.109-inch (2.77 mm)] minimum shank diameter, corrosion-resistant roofing nails having minimum 1-inch-diameter (25.4 mm) plastic caps. The fasteners must be spaced 8 inches (203 mm) on center at vertical and horizontal laps, and 24 inches (610 mm) on center vertically and horizontally in a staggered pattern in the field of the underlayment, except in areas subject to high winds where underlayment fastening must comply with high wind attachment requirements specified in IBC Section 1507 or IRC Section R905 or 2015 IRC Section R905.1.1, as applicable.

Fasteners must be long enough to penetrate into the sheathing a minimum of  $\frac{3}{4}$  inch (19.1 mm) or through the sheathing, whichever is less. When battens are installed over the underlayment, the underlayment need only be preliminarily attached pending attachment of the battens or counterbattens.

A single layer of minimum 24-inch-wide (610 mm) underlayment must be installed and centered vertically at all valleys before underlayment in the field, and at all hips and ridges after underlayment in the field.

Where the slope is from 2:12 (17-percent slope) up to 4:12 (33-percent slope) and the roof is to be covered with asphalt shingles, or where the slope is from 2 $\frac{1}{2}$ :12 (21-percent slope) up to 4:12 (33-percent slope) and the roof is to be covered with concrete or clay roof tiles, the underlayment must be horizontally lapped 24 inches (610 mm) to the centerline of the underlying course to form two layers with 6-inch (152 mm) vertical laps. Seams in laps must be sealed with adhesives complying with ASTM D4586, Type 1. Subsequent courses of underlayment must be installed parallel to the eave, from the lower edge upwards to the ridge, in a shingle manner. The underlayment must be mechanically fastened as specified above in this section.

#### 4.3 Ice Barrier:

In areas of the roof required to have an ice barrier under IBC Chapter 15, or IRC Chapter 9 or 2015 IRC Section R905.1.2, two layers of the underlayment must be cemented together with a roofing cement complying with ASTM D4586, for a minimum distance of 24 inches (610 mm) inside the exterior wall line of the building. The roof underlayment, in the field of the roof, 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 and under the upper 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. Drip edges, when used, must be mechanically fastened at a maximum distance of 12 inches (305 mm) on center.

#### 4.5 Classified Roofs:

Under the 2015, 2012 and 2009 IBC and IRC, the roofing underlayments may be used as components of classified roof assemblies consisting of Class A or C glass fiber mat shingle or Class C asphalt organic felt shingle complying with the applicable code, when installed in accordance with this report over a minimum  $\frac{3}{8}$ -inch-thick (9.5 mm) plywood deck.

Under the 2015, 2012 and 2009 IBC, the underlayment may be used in Class A roof assemblies that include the roof coverings specified in the exceptions to IBC Section 1505.2.

Under the 2015, 2012 and 2009 IRC, the underlayment may be used in Class A roof assemblies that include the roof coverings specified in the exceptions to Section R902.1.

## 5.0 CONDITIONS OF USE

The Roofnado™ AnchorDeck™, Roofnado™ StormTread™, Roofnado™ ShingleLock™, and Roofnado™ StormTread™MW synthetic roof underlayments 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 Installation must comply with this report, the report holder's published installation instructions, and the applicable code. In the event of conflict between the published installation instructions and this report, this report governs.
- 5.2 Installation must be limited to roofs with a minimum slope of 2:12 (17 percent slope) or to the minimum slope required for the roof covering in accordance with the applicable code, whichever is greater.
- 5.3 Installation must be limited to use with roof coverings that do not involve hot asphalt or coal-tar pitch.
- 5.4 Installation must be limited to solid substrates complying with the applicable code.
- 5.5 Installation must be limited to use with approved roof coverings that are mechanically fastened through the underlayment to the sheathing or rafters, or to use with approved roof coverings that are mechanically fastened to battens or counterbattens that are mechanically fastened through the underlayment to the sheathing or rafters.
- 5.6 Installation must be limited to roofs with ventilated attic spaces in accordance with the requirements of the applicable code.
- 5.7 The products are 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 Roof Underlayments (AC188), dated February 2012 (editorially revised December 2015).
- 6.2 Reports of testing in accordance with ASTM E108 (UL 790).

## 7.0 IDENTIFICATION

The products described in this report are marked with the date of manufacture at every four feet.

Each roll of the product described in this report is marked with the report holder's name and address, the product name, and the ICC-ES evaluation report number (ESR-4055).