

# ICC-ES Evaluation Report

ESR-5220


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<p><b>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</b></p> <p><b>Section: 07 30 05— Roofing Felt and Underlayment</b></p>	<p><b>REPORT HOLDER:</b>  ITM CO., LTD.</p>	<p><b>EVALUATION SUBJECT:</b>  ITM-UDL-100-3L, ITM-UDL-100-4L, ITM-UDL-110-3L AND ITM-UDL-110-4L SYNTHETIC ROOFING UNDERLAYMENTS</p>	
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## 1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021 and 2018 [International Building Code® \(IBC\)](#)
- 2021 and 2018 [International Residential Code \(IRC\)](#)

Property evaluated:

- Physical properties

## 2.0 USES

The ITM-UDL-100-3L, ITM-UDL-100-4L, ITM-UDL-110-3L and ITM-UDL-110-4L synthetic roofing underlayments are used as alternatives to the ASTM D226, Type I and Type II, roofing underlayments specified in IBC Chapter 15 and IRC Chapter 9.

## 3.0 DESCRIPTION

**3.1 ITM-UDL-100-3L and ITM-UDL-100-4L:** The ITM-UDL-100-3L synthetic roofing underlayment is a woven scrim with bottom and top layer laminations. The ITM-UDL-100-4L synthetic roofing underlayment is a woven scrim with bottom and top laminations including a spun-bond layer. The underlayment has a nominal weight of 2.04 pounds per 100 ft<sup>2</sup> (100 g/m<sup>2</sup>) and is available in 48 inches (1219 mm) wide by 250 feet (76.2 m) long rolls.

**3.2 ITM-UDL-110-3L and ITM-UDL-110-4L:** The ITM-UDL-110-3L synthetic roofing underlayment is a woven scrim with bottom and top layer laminations. The ITM-UDL-110-4L synthetic roofing underlayment is a woven scrim with bottom and top laminations including a spun-bond layer. The underlayment has a nominal weight of 2.25 pounds per 100 ft<sup>2</sup> (110 g/m<sup>2</sup>) and is available in 48 inches (1219 mm) wide by 250 feet (76.2 m) long rolls.

## 4.0 INSTALLATION

### 4.1 General:

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

Prior to application of the underlayment, the deck surface must be 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 must be covered by the roof covering within the time period 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 Application:

The underlayment must be installed in accordance with IBC Chapter 15 or IRC Chapter 9. The underlayment must be laid horizontally (parallel to the eave), with the printed side up, starting at the lower edge of the roof, with 4-inch (101 mm) horizontal (head) laps and 6-inch (152 mm) vertical (end) laps.

Underlayment must be applied in accordance with IBC Table 1507.1.1(2) or IRC Table R905.1.1(2) and mechanically attached in accordance with IBC Table 1507.1.1(3) or IRC Table R905.1.1(3), as applicable. The underlayment must be fastened to the roof deck using corrosion-resistant roofing nails having a minimum 1-inch-diameter (25.4 mm) plastic or metal caps; or No. 16 gage [0.065 inch leg diameter (1.65 mm)] corrosion-resistant staples having minimum  $7/16$ -inch crowns (11.1 mm) with minimum 1-inch-diameter (25.4 mm) plastic or metal caps. Dimensional tolerances of fasteners conform to ASTM F1667. Fasteners must be long enough to penetrate the sheathing a minimum of  $3/4$  inch (19.1 mm) or through the sheathing, whichever is less.

Where the slope is from 2:12 (17-percent slope) up to 4:12 (33-percent slope), the underlayment must be horizontally lapped to the centerline of the underlying course to form two layers with 6-inch (152 mm) vertical laps. 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 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, 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 must be mechanically fastened at a maximum of 12 inches (305 mm) on center.

## 5.0 CONDITIONS OF USE:

The ITM-UDL-100-3L, ITM-UDL-100-4L, ITM-UDL-110-3L and ITM-UDL-110-4L synthetic roofing underlayments described in this report comply 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 The installation must comply with this report, the report holder's published installation instructions and the applicable code. In the event of a conflict between this report and the report holder's published installation instructions, this report governs.
- 5.2 Installation is limited to roofs with a minimum slope of 2:12 (16.67 percent) or to the minimum slope required for the roof covering in accordance with the applicable code, whichever is greater.
- 5.3 Installation is limited to use with roof coverings that do not involve hot asphalt or coal-tar pitch.
- 5.4 Installation is limited to solid substrates complying with the applicable code.
- 5.5 Installation is limited to roofs with ventilated attic spaces in accordance with the requirements of the applicable code.
- 5.6 Installation is limited to use with 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.
- 5.7 Installation must be limited to use on structures located in areas where nonclassified roof coverings are permitted or as a component of a classified roofing assembly when specifically evaluated as such in a listing approved by the code official.
- 5.8 The roofing underlayments are manufactured under a quality control program with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Roof Underlayments \(AC188\)](#), dated February 2023.

## 7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5220) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 In addition, each roll of synthetic roofing underlayment is identified by a label bearing the following information: company name (ITM Co., Ltd.), product name (ITM-UDL-100-3L, ITM-UDL-100-4L, ITM-UDL-110-3L or ITM-UDL-110-4L), and production date or lot number.
- 7.3 The report holder's contact information is the following:

**ITM CO., LTD.**

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