



- Compliance with International Codes
- Compliance with State Codes

## ICC-ES Evaluation Report ESR-1677

Reissued January 2023

This report is subject to renewal January 2024.

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
**Section: 07 30 05—Roofing Felt and Underlayment**

**REPORT HOLDER:**

GCP APPLIED TECHNOLOGIES, INC.

**EVALUATION SUBJECT:**

GRACE ICE & WATER SHIELD® SELF-ADHERING ROOF UNDERLAYMENT

### 1.0 EVALUATION SCOPE

**1.1 Compliance with the following codes:**

- 2021, 2018, 2015 and 2012 *International Building Code*® (IBC)
- 2021, 2018, 2015 and 2012 *International Residential Code*® (IRC)

**Properties evaluated:**

- Physical properties
- Ice barrier

**1.2 Evaluation to the following green standards:**

- 2022 and 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2020, 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

**Attributes verified:**

See Section 2.0

### 2.0 USES

Grace Ice & Water Shield® membrane is used as a substitute for the ice barrier specified in Chapter 15 of the IBC and in Chapter 9 of the IRC.

The attributes of the Grace Ice & Water Shield® membrane have been verified as conforming to the requirements of (i) ICC 700-2020 Sections 602.1.13, 11.602.1.13, 1202.9 and 13.104.1.7; (ii) ICC 700-2015 and ICC 700-2012 Sections 602.1.13, 11.602.1.13 and 12.5.602.1.14; (iii) ICC 700-2008 Section 602.10 for ice barriers; and (iv) 2022 and 2019

CALGreen Section A4.407.5 for Ice Barriers. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

### 3.0 DESCRIPTION

Grace Ice & Water Shield® is a 40-mil-thick (1.0 mm), self-adhering membrane composed of rubberized-asphalt and embossed polyethylene film, available in rolls 6, 9, 12, 18 and 36 inches wide (152, 229, 305, 457 or 914 mm) and 36, 50, 66.7 and 75 feet long (11, 15.2, 20.3 or 23 m). The rubberized-asphalt surface is backed with release paper.

### 4.0 INSTALLATION

The membrane must be installed in accordance with this report, the report holder's published application instruction, the approved plans (if applicable), and the applicable provisions of the code. In the case of a conflict amongst these documents, this report governs.

Prior to application of the membrane, the deck surface must be free of frost, dust, dirt, loose nails, or protrusions. Damaged sheathing must be replaced. Installation of the membrane is limited to plywood substrates complying with the requirements of the applicable code. The membrane must not be applied when the ambient air and deck temperatures are below 40°F (4.4°C).

The membrane must be cut into 10- to 15-foot (3- to 5-m) lengths and rolled loosely. The end of the roll must be secured with corrosion resistant roofing nails. Peel back 1- to 2-feet (300- to 600-mm) of release liner, align the membrane, and continue to peel the release liner from the membrane. Press the membrane in place with heavy hand pressure. Side laps must be a minimum of 3½ inches (90 mm) and end laps a minimum of 6 inches (150 mm). For valley and ridge application, peel the release liner, center the sheet over the valley or ridge, drape, and press it in place. Work from the center of the valley or ridge outward in each direction and start at the low point and work up the roof.

Alternatively, starting with a full roll of membrane, unroll a 3- to 6-foot (1- to 2-m) piece of membrane leaving the release liner in place. Align the membrane and roll in the intended direction of membrane application. Cut the release liner on top of the roll in the cross direction being careful not

to cut the membrane. Peel back minimum 6 inches (150 mm) of the release liner in the opposite direction of the intended membrane application exposing the black adhesive. Hold the release liner with one hand and pull the roll along the deck with the release liner, leaving the applied membrane behind. Use the other hand to apply pressure on the top of the roll. Frequently press the membrane in place with heavy hand pressure.

Install the membrane such that all laps shed water. Always work from the low point to the high point of the roof. Apply the membrane in valleys before the membrane is applied to the eaves. Following placement along the eaves, continue application of the membrane up the roof. The membrane may be installed either parallel or perpendicular to the roof slope.

If the membrane becomes misaligned, the roll must be cut and restarted. After application, the membrane must be inspected and any defect repaired. "Fish mouths" must be slit, pressed flat and covered with a patch of membrane that extends beyond the damaged area a minimum of 6 inches (152 mm) in all directions. Flashing around protrusions is installed over the membrane to prevent water backup. Other flashing must be installed in accordance with the applicable code.

The membrane is not intended to be left exposed and must be covered by an approved roof covering, immediately after application. For reroofing applications, the same procedures apply after removal of the existing roof covering to expose the plywood roof deck.

## 5.0 CONDITIONS OF USE

The Grace Ice & Water Shield® membrane 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. In the event of conflict between

the manufacturer's instructions and this report, this report governs.

**5.2** Installation is limited to plywood substrates on structures located in areas where nonclassified roof coverings are permitted.

**5.3** The self-adhesive membranes must be installed when the air, roof deck and membrane are at temperatures of 40°F (4.4°C) or above.

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

**5.5** Grace Ice & Water Shield® is manufactured under quality control programs with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Self-adhered Roof Underlayments for Use as Ice Barriers (AC48), dated February 2012 (editorially revised February 2021).

## 7.0 IDENTIFICATION

**7.1** The membranes described in this report are identified by a label on the packaging of each roll of membrane bearing the GCP Applied Technologies, Inc. name and address, the product name, the evaluation report number (ESR-1677).

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

**GCP APPLIED TECHNOLOGIES, INC.**

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**1.0 REPORT PURPOSE AND SCOPE**

**Purpose:**

The purpose of this evaluation report supplement is to indicate that Grace Ice & Water Shield® membrane, described in ICC-ES evaluation report ESR-1677, has also been evaluated for compliance with the codes noted below.

**Applicable code editions:**

- 2022 and 2019 *California Building Code (CBC)*

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 and 2019 *California Residential Code (CRC)*

**2.0 CONCLUSIONS**

**2.1 CBC:**

The Grace Ice & Water Shield® membrane, described in Sections 2.0 through 7.0 of the evaluation report ESR-1677, complies with CBC Chapter 15 provided the design and installation are in accordance with the 2021 and 2018 *International Building Code®* (IBC) provisions, as applicable, noted in the evaluation report and the additional requirements of CBC Chapter 15, as applicable.

**2.1.1 OSHPD:**

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

**2.1.2 DSA:**

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

**2.2 CRC:**

The Grace Ice & Water Shield® membrane, described in Sections 2.0 through 7.0 of the evaluation report ESR-1677, complies with CRC Chapter 9, provided the design and installation are in accordance with the 2021 and 2018 *International Residential Code®* (IRC) provisions, as applicable, noted in the evaluation report and the additional requirements of CRC Chapter 9, as applicable.

This supplement expires concurrently with the evaluation report, reissued January 2023.