



### PROTECTO WRAP COMPANY

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### RAINPROOF-40™

### RAINPROOF-60™

### JIFFY SEAL® ICE AND WATER GUARD

### JIFFY SEAL® ICE AND WATER GUARD HT

### JIFFY SEAL® BUTYL ICE AND WATER GUARD HT

#### CSI Section:

07 30 05 Roofing Felt and Underlayment

## 1.0 RECOGNITION

Rainproof-40™, Rainproof-60™, Jiffy Seal® Ice and Water Guard, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard HT membranes described in this report have been evaluated for use as alternatives to the ice barrier specified in Chapter 15 of the IBC and Chapter 9 of the IRC. Jiffy Seal® Ice and Water Guard, Rainproof-40™, Rainproof-60™, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard HT membranes may be used as alternatives to ASTM D226, Type I and Type II roofing underlayments specified in Chapter 15 of the IBC and Chapter 9 of the IRC. Jiffy Seal® Ice and Water Guard, Rainproof-40™, and Rainproof-60™ membranes may be used as valley flashing, in accordance with Sections 3.4 and 3.5 of this report. The physical properties were evaluated for compliance with the following codes and regulations:

- 2018, 2015, 2012 and 2009 International Building Code® (IBC)
- 2018, 2015, 2012 and 2009 International Residential Code® (IRC)
- 2020 Florida Building Code, Building (FBC, Building) -Supplement attached
- 2020 Florida Building Code, Residential (FBC, Residential) –Supplement attached.

## 2.0 LIMITATIONS

The Jiffy Seal® Ice and Water Guard, Rainproof-40™ and Rainproof-60™, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard HT membranes described in this report are subject to the following limitations:

2.1 Application of the membranes shall be in accordance with this evaluation report, the applicable code, and the manufacturer’s published installation instructions. If there are any conflicts between the manufacturer’s published installation instructions and this report the more restrictive governs.

2.2 Application of the Jiffy Seal® Ice and Water Guard, Rainproof-40™ and Rainproof-60™ membranes is limited to use on exterior grade plywood substrates on structures located in areas where non-classified roof coverings are permitted or as a component of a classified roofing assembly when specifically recognized as such in a listing approved by the building official.

2.3 Application of the Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard HT membranes is limited to use on exterior grade plywood or OSB substrates on structures located in areas where non-classified roof coverings are permitted or as a component of a classified roofing assembly when specifically recognized as such in a listing approved by the building official.

2.4 Installations of concrete and clay roof tiles adhered with Polypro AH160 Roof Tile Adhesive, manufactured by PolyFoam Products, Inc. over Rainproof-40™ and Rainproof-60™ underlayment shall maintain their respective roof fire classifications. Installation of other fire classified roof coverings is outside the scope of this report.

2.5 Application is limited to roofs with slopes of 2:12 (16.67 percent) or greater.

2.6 Roof coverings shall be mechanically fastened through the underlayments to the sheathing or rafters, except as noted in Section 3.6 of this report.

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

2.8 Products recognized in this report are manufactured by Protecto Wrap in Denver, Colorado.

## 3.0 PRODUCT USE

3.1 **General:** Jiffy Seal® Ice and Water Guard, Rainproof-40™ and Rainproof-60™, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard HT membranes may be used as alternatives to the ice barrier specified in Chapter 15 of the IBC and Chapter 9 of the IRC. Jiffy Seal® Ice and Water Guard, Rainproof-40™, Rainproof-60™, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard HT membranes may be used as alternatives to ASTM D226, Type I and Type II

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





roofing underlayments specified in Chapter 15 of the IBC and Chapter 9 of the IRC. Jiffy Seal® Ice and Water Guard, Rainproof-40™ and Rainproof-60™ membranes may be used as valley flashing, in accordance with Sections 3.4 and 3.5 of this report.

Rainproof-40™ and Rainproof-60™ may be used as underlayment for adhered roof tile installations in accordance with Section 3.6 of this report.

**3.2 Installation:** Installation of the Protecto Wrap membranes shall comply with this report and the manufacturer's published installation instructions. The installation instructions shall be available at the jobsite at all times during installation.

Surfaces to receive the Protecto Wrap membranes described in this report shall be free from frost, dust, dirt, loose nails and other protrusions. The membranes shall be installed over undamaged plywood substrates complying with the requirements of the applicable code. The membranes shall be installed parallel with the eave, starting from the lower edge of the roof and working upwards in a shingle-lapped manner. When used as an ice barrier the Protecto Wrap membranes shall be installed in sufficient courses such that the ice barrier membrane extends from the lowest edges of the roof surface to a point at least 24 inches (610 mm) inside the exterior wall line of the building as prescribed by Chapter 15 of the IBC or Chapter 9 of the IRC, as applicable.

Applications shall be properly aligned. The release film on the membrane's bottom surface is removed during installation and the membrane pressed firmly into place. Any defects shall be repaired, such as 'fish mouths' which shall be slit, pressed flat, and covered with a patch that overlaps 6 inches (152 mm) minimum from slit. Protrusions and drip edges shall have flashing installed over the membrane to prevent water backup.

Protecto Wrap membranes are not intended to be left exposed to the elements. Roof coverings shall be installed immediately after application of the membrane.

**3.2.1 Reroofing:** For reroofing applications, the membranes shall be installed after removal of the existing roof covering and existing roofing underlayments to expose the roof deck.

**3.3 Jiffy Seal® Ice and Water Guard:** Jiffy Seal® Ice and Water Guard membrane shall be installed with end seams overlapped a minimum of 4 inches (102 mm) and edge seams overlapped a minimum of 2½ inches (64 mm). Jiffy Seal® Ice and Water Guard membrane shall be applied a minimum of two sheets wide. Jiffy Seal® Ice and Water Guard shall be installed when the ambient air and substrate temperature is greater than 40°F (4.4°C).

For reroofing applications, where the substrate is not cleaned to a new surface condition, Protecto Wrap #80 Primer, Protecto Wrap BT-Primer, or Protecto Wrap Universal Water-Based Primer shall be used in accordance with the manufacturer's written installation instructions. Primed surfaces shall be covered with the Protecto Wrap membrane on the same day that the primer is applied.

Where valley flashing occurs a 30 inch (762 mm) wide roll of Jiffy Seal® Ice and Water Guard membrane shall be centered down the full length of the valley. The valley membrane shall overlap the field membrane and be trimmed to match the centerline of the valley. Metal valley flashing shall be fastened in accordance with the applicable code.

**3.4 Rainproof-40™ and Rainproof-60™:** Rainproof-40™ and Rainproof-60™ membranes shall be applied to substrates that have been primed with Protecto Wrap #80 Primer, Protecto Wrap #100 Primer, Protecto Wrap BT-Primer, or Protecto Wrap Universal Water-Based Primer in accordance with the manufacturer's written installation instructions. Primed surfaces shall be covered with the Protecto Wrap membrane on the same day that the primer is applied. The membrane shall be installed with two inches (51 mm) of material extending past the roof edge. This two-inch (51 mm) extension of material shall be adhered to the fascia board and covered with a 2 inch by 2 inch (51 x 51 mm) galvanized metal edge or rake tile. The membrane shall be installed with end seams overlapped a minimum of 6 inches (152 mm) and edge seams overlapped a minimum of 3½ inches (89 mm).

**3.4.1 Valley Flashing:** Where valley flashing occurs a 36 inch (914 mm) wide roll of Rainproof-40™ and Rainproof-60™ shall be centered down the full length of the valley. The valley membrane shall overlap the field membrane and be trimmed to match the centerline of the valley. JS160H mastic shall be placed between the valley membrane and field membrane. Metal valley flashing shall be fastened in accordance with the applicable code.

**3.4.2 Underlayment for Adhered Roof Tiles.** Rainproof-40™ and Rainproof-60™ membrane may be used as an underlayment to which concrete or clay roof tiles may be adhered. The roof tiles shall be adhered with Polypro AH160 Roof Tile Adhesive, manufactured by PolyFoam Products, Inc. The adhesive shall be recognized in a current and valid evaluation report issued by an approved evaluation agency. Installation of the adhesive roof tile system shall be in accordance with the manufacturer's installation instructions and the current and valid evaluation report. Concrete and clay tile roof coverings installed with Rainproof-40™ and Rainproof-60™ underlayment shall maintain their respective roof fire classifications. The Rainproof-40™ and Rainproof-60™ underlayment shall be adhered directly to the substrate deck or adhered to a sheet of Type II asphalt-saturated felt complying with ASTM D226 which is mechanically



fastened to the solid decking with fasteners at the laps, one row at the top edge, and two rows of fasteners staggered in the field of the felt.

**3.7 Jiffy Seal® Ice and Water Guard HT:** Jiffy Seal® Ice and Water Guard HT membrane may be adhered to exterior grade plywood or OSB. The membrane shall be installed with end seams overlapped a minimum of 6 inches (152 mm) and edge seams overlapped a minimum of 3 inches (76 mm). Jiffy Seal® Ice and Water Guard HT shall be installed when the ambient air and substrate temperature is greater than 40°F (4.4°C).

Where valley flashing occurs, a minimum 18-inch (457 mm) wide roll of Jiffy Seal® Ice and Water Guard HT membrane shall be centered down the full length of the valley. The valley membrane shall overlap the field membrane and be trimmed to match the centerline of the valley. Metal valley flashing shall be fastened in accordance with the applicable code.

**3.8 Jiffy Seal® Butyl Ice and Water Guard HT:** Jiffy Seal® Butyl Ice and Water Guard HT membrane may be adhered to exterior grade plywood or OSB. The membrane shall be installed with end seams overlapped a minimum of 6 inches (152 mm) and edge seams overlapped a minimum of 3 inches (76 mm). Jiffy Seal® Butyl Ice and Water Guard HT shall be installed when the ambient air and substrate temperature is greater than 20°F (-6.7°C).

## 4.0 PRODUCT DESCRIPTION

**4.1 Jiffy Seal® Ice and Water Guard:** Jiffy Seal® Ice and Water Guard consists of a self-adhering reinforced modified bituminous membrane that is tacky on both sides. The product has a release film on both sides that is removed during installation. Jiffy Seal® Ice and Water Guard nominal thickness is 40 mil [0.040 inch (1.02 mm)] and produced in rolls that are 12, 30, or 60-inches wide by 75 feet long (305, 762 or 1524 mm by 22.9 m).

**4.2 Rainproof-40™ and Rainproof-60™** Rainproof-40™ and Rainproof-60™ membranes are similar in appearance to Jiffy Seal® Ice and Water Guard described above except with a reflective white top coating. The product has a release film on the bottom surface that is removed during installation. Rainproof-40™ and Rainproof-60™ membranes are nominally 40 and 60-mil thick [0.040 and 0.060 inches (1.02 and 1.52 mm)] respectively. The products are produced in rolls that are 30, 36, or 60-inches wide by 75 feet long (762, 914 or 1524 mm by 22.9 m).

**4.3 Jiffy Seal® Ice and Water Guard HT:** Jiffy Seal® Ice and Water Guard HT membrane consists of a proprietary three-layer woven polypropylene fabric, coated on one side with a blend of butyl and rubberized asphalt. The product has a release film on the bottom surface that is removed during installation. Jiffy Seal® Ice and Water Guard HT has

a nominal thickness of 40 mil [0.040 inch (1.02 mm)] and produced in rolls that are 36-inches wide by 36, 66 or 75-foot long (914 mm by 11.0, 20.1 or 22.9 m).

**4.4 Jiffy Seal Butyl Ice and Water Guard HT:** Jiffy Seal® Butyl Ice and Water Guard HT membranes consists of a proprietary three-layer woven polypropylene fabric, coated on one side with a butyl adhesive. The product has a release film on the bottom surface that is removed during installation. Jiffy Seal® Butyl Ice and Water Guard HT has a nominal thickness of 30-mil [0.030 inch (0.76 mm)] and produced in rolls that are 36-inches wide by 66-foot long (914 mm by 20.1 m).

**4.5 Primers:** Primers used with the Protecto Wrap membranes described in this report include:

**Protecto Wrap #80 Primer** – an exterior-grade primer containing solvents and is used at full strength without dilution. The #80 Primer is packaged in 1- or 5-gallon pails or 55-gallon drums and has a one-year shelf life.

**Protecto Wrap #100 Primer** – a high-tack, SBS rubber-based primer used in vertical applications. The #100 Primer is packaged in 1- or 5-gallon pails or 55-gallon drums and has a one-year shelf life.

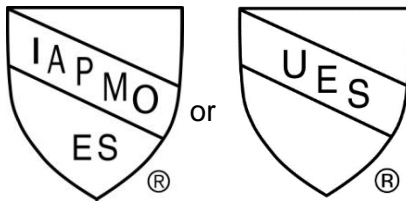
**Protecto Wrap BT-Primer** – a high-tack polymeric based primer which contains solvents. BT-Primer is packaged in 1- or 5-gallon pails and has a one-year shelf life.

**Protecto Wrap Universal Water-Based Primer** – a low-VOC non-solvent based primer. Universal Water Based Primer is packaged in 1- or 5-gallon containers and has a one-year shelf life.

**4.6 JS160H Mastic sealant:** JS160H Mastic is a rubberized adhesive liquid membrane used to seal the membranes at terminations, end laps, seams, and for membrane repairs. JS160H Mastic is available in 10.5-ounce (311 ml) tubes, and 1- or 5-gallon (3.8 L or 18.9 L) cans with a shelf life of one-year.

## 5.0 IDENTIFICATION

A label shall be affixed on the container of each roll of membrane. The label shall include the Protecto Wrap Company name, product name, manufacturing location, the UES mark of conformity, and the Evaluation Report Number (ER-390) to identify the products recognized in this report. A die-stamp label may also substitute for the label. Either Mark of Conformity may be used as shown below:



## IAPMO UES ER-390

### 6.0 SUBSTANTIATING DATA

**6.1** Data in accordance with ICC-ES AC48, dated February 2012, editorially revised May 2018; ICC-ES AC188, dated February 2012, editorially revised June 2020; and ICC-ES AC152, dated February 2016, editorially revised January 2019 as applicable.

**6.2** Manufacturer's descriptive literature and installation instructions.

**6.3** Test reports are from laboratories in compliance with ISO/IEC 17025.

### 7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Rainproof-40™, Rainproof-60™, Jiffy Seal® Ice and Water Guard, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard HT membranes to assess conformance to the codes and standards shown in Section 1.0 of this report and documents the product's certification. Products are manufactured at locations noted in Section 2.8 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email us at [info@uniform-es.org](mailto:info@uniform-es.org)



## FLORIDA SUPPLEMENT

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### CSI Section:

**07 30 05 Roofing Felt and Underlayment**

### 1.0 RECOGNITION

The Protecto Wrap Company's Rainproof-40™, Rainproof-60™, Jiffy Seal® Ice and Water Guard, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard HT membranes evaluated in IAPMO UES ER-390 are satisfactory alternatives to the following codes and regulations:

- 2020 Florida Building Code, Building (FBC, Building)
- 2020 Florida Building Code, Residential (FBC, Residential)

### 2.0 LIMITATIONS

The Rainproof-40™, Rainproof-60™, Jiffy Seal® Ice and Water Guard, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard membranes described in ER-390 and this report supplement are subject to the following limitations:

**2.1** Installation shall be in accordance with ER-390 and Section 1507.5 of the FBC, Building or Section R905.10 of the FBC, Residential, as applicable.

**2.2** Use of the Rainproof-40™, Rainproof-60™, Jiffy Seal® Ice and Water Guard, Jiffy Seal® Ice and Water Guard HT and Jiffy Seal® Butyl Ice and Water Guard membranes for compliance with the high-velocity hurricane zone provisions of the FBC, Building and FBC, Residential has not been evaluated and is outside the scope of this evaluation report.

**2.3** Underlayment shall be installed and attached in accordance with Table 1507.1.1.1 and as noted in section

1507.1.1 of the 2020 FBC for the applicable roof covering and slope, except that metal cap nails shall be required where the ultimate design wind speed,  $V_{ult}$ , equals or exceeds 150 mph (241 kph), in compliance with the Exception to Section 1507.1.1 of the 2017 FBC.

**2.4** When used with clay and concrete roof tiles the underlayment shall be installed in accordance with this report, ER-390, or the recommendations of the FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition (December 31, 2020) where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1 of the FBC or the recommendations of RAS 111, 118, 119 or 120, in compliance with Section 1507.3.3 of the 2020 FBC.

**2.5** Slope requirements for specific clay and concrete roof tile systems shall be in accordance with Section 1507.3.3.1 of the 2020 FBC.

**2.6** Verification shall be provided that a quality assurance agency audits the manufacturers quality assurance program and audits the production quality of products, in accordance with Section (5)(d) of Florida Rule 61G20-3.008. The quality assurance agency shall be approved by the Commission (or the building official when the report holder does not possess an approval by the Commission).

For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email us at [info@uniform-es.org](mailto:info@uniform-es.org)