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### ADDITIONAL COMPANY

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**VEER PLASTICS PVT. LTD.:**  
**VHOUSE PREMIUM HOUSEWRAP**

**KINGSPAN INSULATION LLC.:**  
**GreenGuard® RAINDROP 3D BUILDING WRAP**

#### CSI Sections:

- 07 25 00 Water-resistive Barriers/Weather Barriers
- 07 27 00 Air Barriers

### 1.0 RECOGNITION

Veer Plastics VHouse Premium Housewrap and Kingspan Insulation LLC. GreenGuard® Raindrop 3D Building Wrap recognized in this report have been evaluated for use as a water-resistive barrier (WRB). The VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap comply as 60-minute Grade D papers and are equivalent to ASTM E2556, Type II. The composition, durability, surface burning characterizes, air leakage, and water resistance properties of VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap were evaluated for compliance with the following codes:

- 2021 and 2018 International Building Code® (IBC)
- 2021 and 2018 International Residential Code® (IRC)
- 2021 and 2018 International Energy Conservation Code® (IECC)

VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap may also be used as an air barrier in accordance with Section N1102.4.1 of the IRC and Sections C402.5 and R402.4 of the IECC.

### 2.0 LIMITATIONS

Use of the VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap recognized in this report are subject to the following limitations:

**2.1** VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap shall be covered with an approved exterior wall covering complying with the applicable code and in accordance with the wall covering manufacturer's installation instructions.

**2.2** A copy of the manufacturer's published installation instructions and this report shall be available on the jobsite and strictly adhered to at all times during installation. Where conflicts occur, the more restrictive provision governs.

**2.3** The VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap shall be produced by Veer Plastics PVT. Ltd. in Gandhinagar, Gujarat India.

### 3.0 PRODUCT USE

**3.1 General:** VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap have been evaluated in this report for use as a water-resistive barrier on the exterior side of Type V-B construction, non-fire-resistance-rated walls of buildings that are not more than 40 feet (12 m) in height above grade plane as permitted in Section 1405 of the IBC, or non-fire-resistance-rated construction permitted under the IRC.

VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap have a minimum drainage efficiency of 90 percent when tested in accordance with ASTM E2273. It is qualified for use under Sections 1407.4.1, 1407.4.1.1, 2510.6.1(2), and 2510.6.2(2) of the 2021 IBC and Sections 1407.4.1, 1407.4.1.1, and 2510.6 Exception 1 of the 2018 IBC.

**3.2 Installation:** VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap shall be installed on the outside of the insulation cavity, over an approved exterior sheathing board or insulation in accordance with the manufacturer's installation instructions, with the printed side installed facing the exterior. Horizontal overlaps shall be at least 6 inches (152.4 mm), and vertical overlaps at least 6 inches (152.4 mm) and shall extend over the foundation by 2 inches (51 mm) minimum.

For the additional company, supplementary installation information may be contained in their specific instructions. If a conflict arises, the most restrictive requirements govern.

*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.*

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## 4.0 PRODUCT DESCRIPTION

VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap are a woven polypropylene fabric that has a monolithic polymer coating on one side. The housewrap is 6 mils in thickness and is available in rolls of various lengths, and in widths of 3, 5, 9, or 10 feet (0.9, 1.5, 2.7, or 3.0 m). VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap weigh 3.79 oz/yd<sup>2</sup> (128 g/m<sup>2</sup>).

VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap have a flame spread index of not more than 25 and a smoke-developed index of not more than 450 when tested in accordance with ASTM E84.

VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap have an air leakage rate not exceeding 0.02 L/s-m<sup>2</sup> at 75 Pa [0.004 cfm-ft<sup>2</sup> at 0.3 w.g. (1.57 psf)] when used as an air barrier in accordance with Section N1102.4.1 of the IRC and Sections C402.5 and R402.4 of the IECC.

VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap have an average water vapor transmission greater than 35 grams per sq. meter per 24 hours when tested in accordance with both the desiccant method (procedure A) and the water method (procedure B) of ASTM E96 and are alternatives to vapor permeable materials as defined in IBC Section 202 and IRC Section R202.

## 5.0 IDENTIFICATION

VHouse Premium Housewrap and GreenGuard® Raindrop 3D Building Wrap are identified by the Veer Plastics Pvt. Ltd. or Kingspan Insulation LLC. name and trademark, product name, and evaluation report number (ER-839), printed on the surface at regular intervals. The IAPMO Uniform Evaluation Service Mark of Conformity may also be used as shown below:



**IAPMO UES ER-839**

## 6.0 SUBSTANTIATING DATA

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

6.2 Test reports on testing in accordance with ASTM D779, ASTM D882, ASTM E84, ASTM E96 (Procedure A and Procedure B), ASTM E2178, ASTM E2273, ASTM E2556, and ASTM G154.

6.3 Data in accordance with the Acceptance Criteria for Water-resistive Barriers (AC38), approved August 2016, editorially revised July 2021.

## 7.0 REFERENCE CODE SECTIONS

The code references apply to the recognition provided in this report but may not include every code section related to the use of this product.

### International Building Code:

- Section 104.11 Alternative materials, design and methods of construction and equipment.
- Section 202 Definitions (Air-Impermeable Insulation)
- Section 1402.5 Water-resistive barriers. (2021 IBC)
- Section 1402.5 Vertical and lateral flame propagation. (2018 IBC)
- Section 2510.6 Water-resistive barriers.

### International Residential Code:

- Section R104.11 Alternate materials, design and methods of construction and equipment.
- Section R202 Definitions (Air-Impermeable Insulation).
- Section R703.7.3 Water-resistive barriers.
- Section N1102.4.1 Building Thermal Envelope.

### International Energy Conservation Code:

- Section C102 Alternative Materials, Design and Methods of Construction and Equipment.
- Section C402.5 Building Envelope Requirements.
- Section R102 Alternative Materials, Design and Methods of Construction and Equipment.
- Section R402.4 Building Thermal Envelope.

## 8.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Veer Plastics Pvt. Ltd. VHouse Premium Housewrap and Kingspan Insulation LLC. GreenGuard® Raindrop 3D Building Wrap to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. on Veer Plastics Pvt. Ltd. VHouse Premium Housewrap and Kingspan Insulation LLC. GreenGuard® Raindrop 3D Building Wrap are manufactured at locations noted in Section 2.3 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)