Code Compliance Research Report
CCRR-1018

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Renewal Date: 02-28-2027

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 25 00 – Water-Resistive Barriers/Weather Barriers
Section: 07 27 00 – Air Barriers

REPORT HOLDER:
Kingspan Insulation, LLC
6120 Powers Ferry Road NW, Suite 350
Atlanta, Georgia 30339
(800) 241-4402
www.kingspaninsulation.us

REPORT SUBJECT:
GreenGuard® Building Wrap Products:

Water-resistive Barriers: GreenGuard® HPW™, Everbilt™ Premium Non-woven Housewrap, GreenGuard® RainDrop® 3D, GreenGuard® MAX™, GreenGuard® VW, GreenGuard® C2000, and GreenGuard® RainArmor™ Building Wraps

Air Barriers: GreenGuard® HPW™, Everbilt™ Premium, GreenGuard® RainDrop® 3D, GreenGuard® MAX™, GreenGuard® C2000, and GreenGuard® RainArmor™ Building Wraps

ADDITIONAL LISTEE:
Diamond Kote Building Products
7102 Commerce Drive
Schofield, Wisconsin 54476

ADDITIONAL LISTEE SUBJECT:
Water-resistive Barrier and Air Barrier: Diamond Kote 5D Building Wrap

ADDITIONAL LISTEE:
Oskorp Inc.
3838 Tamiami Trail N. #416
Naples, FL 34103
www.oskorp.com

ADDITIONAL LISTEE SUBJECT:
OSKORP Gold Wrap Building Wrap

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2024, 2021, and 2018 *International Building Code®* (IBC)
- 2024, 2021, and 2018 *International Residential Code®* (IRC)
- 2024, 2021, and 2018 *International Energy Conservation Code®* (IECC)
- 2023 *Oregon Residential Specialty Code* (ORSC) – See Section 9.1
- 2023 *Florida Building Code [excluding HVHZ]* – See Section 9.2

Note: this report references the most recent version of the Codes cited. Section numbers in earlier versions may differ.

1.2 GreenGuard® Building Wrap products have been evaluated for the following properties (see Table 1):

- Water-resistive barrier
- Surface-burning characteristics
- Air leakage
- Use on Exterior Walls of Buildings of Any Type of Construction, including Types I, II, III, and IV construction
- Drainage efficiency

1.3 GreenGuard® Building Wrap products have been evaluated for the following uses:

- Alternatives to the water-resistive barriers specified in IBC Section 1403.2 and IRC Section R703.2.
- Exterior side of exterior walls of buildings of any type of construction allowed by the IBC and construction permitted under the IRC; when construction is required to be of Type I, II, III, or IV under the IBC, installation must be as described in Section 5.4.
- Behind exterior cement plaster installed over wood-based sheathing in accordance with IBC Section 2510.6 and IRC Section R703.7.3 when installed as described in Section 5.2.

- GreenGuard® HPW™, Everbilt™ Premium, GreenGuard® RainDrop® 3D, GreenGuard® MAX™, GreenGuard® C2000 GreenGuard® RainArmor™, DiamondKote 5D, and OSKORP Gold Wrap may be used as air barrier materials under IRC Section N1102.5.1 and IECC Sections C402.6 and R402.5.

2.0 STATEMENT OF COMPLIANCE

GreenGuard® Building Wrap Products comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

2.1 2024 IBC and IRC Evaluation Reports: The Intertek CCRR is an Evaluation Report for approval of alternate material, design, or method of construction in accordance with Section 104.2.3.6.1 of the 2024 IBC and Section R104.2.2.6.1 of the 2024 IRC.

3.0 DESCRIPTION

3.1 Products:

3.1.1 GreenGuard® HPW™ (High Performance Wrap): GreenGuard® HPW™ is a spun-bond polypropylene non-woven material. It is produced in rolls of varying sizes.

3.1.2 Everbilt™ Premium Non-Woven Housewrap: Everbilt™ Premium is a spun-bond polypropylene non-woven material. It is produced in rolls of varying sizes.

3.1.3 GreenGuard® RainDrop® 3D Building Wrap: GreenGuard® RainDrop® 3D Building Wrap is a cross-woven, non-perforated polyolefin material with a vapor-permeable polyolefin coating. It is produced in rolls of varying sizes.

3.1.4 GreenGuard® MAX™ Building Wrap: GreenGuard® MAX™ Building Wrap is a cross-woven, non-perforated polyolefin material with a vapor-permeable polyolefin coating. It is produced in rolls of varying sizes.

3.1.5 GreenGuard® VW Building Wrap: GreenGuard® VW Building Wrap is a cross-woven, micro-perforated polyolefin material with a polyolefin coating. It is produced in rolls of varying sizes.

3.1.6 GreenGuard® C2000 Building Wrap: GreenGuard® C2000 Building Wrap is a spun-bond, vapor-permeable polyolefin material. It is produced in rolls of varying sizes.

3.1.7 GreenGuard® RainArmor™ Building Wrap is a spunbond polypropylene building wrap with a non-perforated barrier layer. It is produced in rolls of varying sizes.

3.1.8 Diamond Kote 5D Building Wrap is a cross-woven, non-perforated polyolefin material with a vapor-permeable polyolefin coating. It is produced in rolls of varying sizes.

3.1.9 OSKORP Gold Wrap is a spun-bond polypropylene non-woven material. It is produced in rolls of varying sizes.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Surface-Burning Characteristics: All the products described in this report have a flame-spread index of 25 or less and a smoke-developed index of 450 or less, when tested in accordance with ASTM E 84.

4.2 Air Barrier Material: GreenGuard® HPW™, Everbilt™ Premium, GreenGuard® RainDrop® 3D, GreenGuard® MAX™, GreenGuard® C2000, GreenGuard® RainArmor™, Diamond Kote 5D, and OSKORP Gold Wrap have an air leakage rate no greater than 0.02 L/s-m^2 at 75 Pa [0.004 cfm/ft^2 at 0.3-inch w.g. (1.57 psf)] when tested in accordance with ASTM E2178.

5.0 INSTALLATION

5.1 General: Kingspan Building Wrap Products must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 Water-resistive Barrier Application: When used as a water-resistive barrier, the building wrap products must be installed as described in IBC Section 1403.2 and IRC Section R703.2, and in accordance with the manufacturer's published installation instructions.

Two layers of any of the building wrap products recognized in this report may be installed for use in accordance with IBC Section 2510.6 or IRC Section 703.7.3.

GreenGuard® HPW™, Everbilt™ Premium, GreenGuard® RainDrop® 3D, GreenGuard® MAX™, GreenGuard® C2000, Diamond Kote 5D, and OSKORP Gold Wrap may be used where a 60-minute Grade D paper is permitted in the exception to IBC Section 2510.6, and IRC Section R703.7.3.

When used with one-coat stucco or exterior insulation and finish systems (EIFS), application must be in accordance with a current evaluation report on the exterior wall covering.

5.3 Air Barrier Application:

5.3.1 Air Barrier Material: When used as an air barrier material, GreenGuard® HPW™, Everbilt™ Premium, GreenGuard® RainDrop® 3D, GreenGuard® MAX™, GreenGuard® C2000 GreenGuard® RainArmor™, Diamond Kote 5D, and OSKORP Gold Wrap building wraps must be installed in accordance with the manufacturer's published installation instructions and this report.

5.3.2 Air Barrier Assembly: The, GreenGuard® VW GreenGuard® C2000, and Diamond Kote 5D building wrap products are recognized as an air barrier assembly in accordance with IECC Section C402.6.2.3.2, based on testing in accordance with ASTM E2357. The assembly qualifies as a continuous air barrier as prescribed in Section C402.6.1.

The building wrap is attached to sheathing with fasteners and plastic caps specified in the manufacturer's published installation instructions. Seams in the building wrap must be sealed with 3-inch-wide GreenGuard® Seam Tape.

Penetrations in the air barrier assembly must be sealed in accordance with IECC Section C402.6.1.2.

5.4 Exterior Walls of Buildings Required to be of Types I, II, III, or IV Construction: Use of the building wrap products as water-resistive barriers on buildings required to be of Types I, II, III, and IV construction is limited to buildings a maximum of 40 feet in height except where the water-resistive barrier has been tested in an assembly meeting the requirements of NFPA 285. Under the IBC, the GreenGuard® RainDrop® 3D, GreenGuard® MAX™, GreenGuard® VW GreenGuard® C2000, and Diamond Kote5D Building Wraps building wrap products may be used on buildings greater than 40 feet in height where the building wrap is the only combustible component and the exterior wall has a wall covering of brick, concrete, stone, terra cotta, stucco, or steel, with minimum thicknesses in accordance with Table 1404.2.

6.0 CONDITIONS OF USE

The GreenGuard® Building Wrap products described in this Research Report comply with, or are suitable alternatives to, what is specified in those Codes listed in Section 1.0 and Table 1 of this report, subject to the following conditions:

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 The building wrap products must be covered with an approved exterior wall covering in accordance with the applicable Code.

6.3 The design and evaluation of the air barrier assembly, of which the products are a component, are outside the scope of this report.

6.4 The water-resistive barriers are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Reports of flame spread tests in accordance with ASTM E84.

7.2 Reports of air leakage tests in accordance with ASTM E2178 and E2357.

7.3 Report of drainage efficiency tests in accordance with ASTM E2273.

7.4 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated August 2016.

7.5 Intertek Listing Report "Kingspan-GreenGuard Building Wraps".

8.0 IDENTIFICATION

The Kingspan Building Wrap Products are identified with the manufacturer's or the additional listee's name, address and telephone number, the Intertek Mark, an example of which is shown below, and the Code Compliance Research Report number (CCRR-1018).

9.0 OTHER CODES

9.1 OREGON RESIDENTIAL SPECIALTY CODE

9.1.1 Scope of Evaluation: GreenGuard® RainDrop® 3D and Diamond Kote 5D Building Wraps comply with the 2023 *Oregon Residential Specialty Code*, Section R703.1.1, Exception 1, subject to the following conditions:

- A 1/8-inch space between the water-resistive barrier and the exterior veneer is not required when the wall is constructed as follows:
- A single layer of building wrap is installed over the sheathing in accordance with Section 5.0 of this report and the manufacturer's published installation instructions.
- A layer of Grade D building paper is installed over the GreenGuard® RainDrop® 3D or Diamond Kote 5D building wrap.
- A minimum 1/2-inch layer of cementitious scratch coat is applied over self-furring lath complying with, and installed in accordance with, the applicable Code.
- Thin-brick veneer is applied over the scratch coat.

9.2 FLORIDA BUILDING CODE

9.2.1 Scope of Evaluation: The Kingspan Building Wrap products described in Sections 2.0 through 8.0 of this report comply with the 2023 and 2020 *Florida Building Code – Building*, the 2023 and 2020 *Florida Building Code – Residential*, and the 2023 and 2020 *Florida Building Code - Energy*, subject to the following conditions:

- The barrier materials must be installed in accordance with the provisions noted in Sections 2.0 through 8.0.
- Use of the building wrap products for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code – Building* and the *Florida Building Code – Residential* has not been evaluated and is outside the scope of this Research Report.

Intertek is an approved evaluation entity and quality assurance entity pursuant to Florida Statute 553.842 – *Product Evaluation and Approval*.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

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TABLE 1 – PROPERTIES EVALUATED

PROPERTY	2024 IBC[1]	2023 FBC[1]	2024 IBC[1]	2023 FBC - Residential[1]	2024 IECC	2023 Florida Energy Code Section[1]	2023 ORSC Section
Alternative materials	104.2.3.6.1	104.11	R104.2.2	R104.11	NA	NA	NA
Water-resistive barrier	1403.2	1403.2	R703.2	R703.2	NA	NA	NA
Grade D water-resistive barrier	2510.6	2510.6	R703.7.3	R703.7.3	NA	NA	N A
Exterior walls of Types I – IV construction	1404.2	1404.2	NA	NA	NA	NA	NA
Air barrier	1301	1301	N1102.5.1	N1102.4.1	C402.6 and R402.5	C402.5 R402.4	NA
Water drainage efficiency	NA	NA	NA	NA	NA	NA	703.1.1, Exception 1

[1] Section numbers may be different for earlier versions of the International and Florida Codes.