

ICC-ES Evaluation Report

ESR-2375

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**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:
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EVALUATION SUBJECT:

DUPONT™ TYVEK® HOMEWRAP®-STYLE 1055B;
DUPONT™ TYVEK® STUCCOWRAP®-STYLE 1062X;
DUPONT™ TYVEK® DRAINWRAP™-STYLE 1063X;
DUPONT™ TYVEK® COMMERCIALWRAP®-STYLE 1162B;
DUPONT™ TYVEK® COMMERCIALWRAP® D-STYLE 1083; AND DUPONT™ TYVEK® HEADERWRAP

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2009 *International Energy Conservation Code*® (2009 IECC)
- Other Codes (see Section 8.0)

Properties evaluated:

- Water resistance
- Surface-burning characteristics
- Air leakage
- Wall draining characteristics (DuPont™ Tyvek® StuccoWrap®-Style 1062X, DuPont™ Tyvek® DrainWrap™-Style 1063X and DuPont™ Tyvek® CommercialWrap® D-Style 1083 only) for EIFS and one-coat stucco

2.0 USES

DuPont™ Tyvek® HomeWrap®-Style 1055B; DuPont™ Tyvek® StuccoWrap®-Style 1062X; DuPont™ Tyvek® DrainWrap™-Style 1063X; DuPont™ Tyvek® CommercialWrap®-Style 1162B; DuPont™ Tyvek® CommercialWrap® D-Style 1083; and DuPont™ Tyvek®

HeaderWrap® are used as water-resistive barriers on the exterior side of exterior walls of buildings of any construction type under the IBC and construction permitted under the IRC, except as noted in Section 4.4. They are equivalent to Grade D paper with a 60-minute water-resistance rating as described in IBC Section 2510.6 and IRC Section R703.6.3. All products may be used as air barrier materials under IRC Section N1102.4.1 and IECC Sections 402.4 and 502.4.

In addition, DuPont™ Tyvek® StuccoWrap®-Style 1062X, DuPont™ Tyvek® DrainWrap™-Style 1063X and DuPont™ Tyvek® CommercialWrap® D-Style 1083 may be used as components of an EIFS or one-coat stucco drainage system as described in Section 4.4.

3.0 DESCRIPTION

3.1 General:

The products described in this report are comprised of nonwoven, flash spunbonded, nonperforated, olefin sheets that are manufactured from high-density polyethylene fibers combined with an ultraviolet stabilizing additive. The products have been bonded by heat and pressure into sheets with variations as described in Sections 3.2 through 3.6.

All products have a flame spread index of less than 25 and a smoke-developed index of less than 450, when tested in accordance of ASTM E 84.

The sheet materials have an air leakage rate not exceeding 0.02 L/s-m² [0.004 cfm/ft² at 0.3 w.g. (1.57 psf)] when used as an air barrier material under IRC Section N1102.4.1 and IECC Section 402.4 or 502.4.

3.2 DuPont™ Tyvek® HomeWrap®-Style 1055B:

This product is a smooth sheet with a nominal basis weight of 1.8 ounces per square yard (61 grams per square meter) and is produced in rolls of varying sizes.

3.3 DuPont™ Tyvek® StuccoWrap®-Style 1062X:

The product has a surface texture that is intended to allow for drainage of water that may get behind the exterior wall finish material. This product has a nominal basis weight of 2.1 ounces per square yard (71 grams per square meter) and is produced in rolls of varying sizes.

3.4 DuPont™ Tyvek® DrainWrap™-Style 1063X:

The product has a surface texture that is intended to allow for drainage of water that may get behind the exterior wall finish material. This product has a nominal basis weight of 2.1 ounces per square yard (71 grams per square meter) and is produced in rolls of varying sizes.

3.5 DuPont™ Tyvek® CommercialWrap®–Style 1162B:

This product is a smooth sheet with a nominal basis weight of 2.7 ounces per square yard (92 grams per square meter) and is produced in rolls of varying sizes.

3.6 DuPont™ Tyvek® HeaderWrap®:

This product is the same as Tyvek® HomeWrap®–Style 1055B, except that the rolls are narrower.

3.7 DuPont™ Tyvek® CommercialWrap® D-Style 1083:

The product has a surface texture that is intended to allow for drainage of water that may get behind the exterior wall finish material. This product has a nominal basis weight of 2.4 ounces per square yard (81 grams per square meter) and is produced in rolls of varying sizes.

4.0 INSTALLATION

4.1 General:

The manufacturer's published installation instructions and this report must be strictly adhered to. If requested by the code official, a copy of this report must be available at the jobsite during installation.

The use of Tyvek® HeaderWrap® in conjunction with any of the products recognized in Sections 3.2 through 3.5 is optional. The use of tape to seal seams and edges of the products is optional, except as described in Section 4.4 and where required by the manufacturer's installation instructions.

4.2 Water-resistive Barrier:

The water-resistive barriers described in this report are installed after wall framing is completed. The roll is placed 6 to 12 inches (152 to 305 mm) from the starting corner and fastened to the sheathing with corrosion-resistant staples or nails approved by the manufacturer, and is then unrolled around the building and fastened as set forth in the manufacturer's published installation instructions at top and bottom sill plates and at framing members. A minimum of 6 inches (152 mm) of overlap is provided for vertical seams and 2 inches (51 mm) for horizontal seams, except where the manufacturer's installation instructions specify a greater overlap dimension. When use is over wood-based sheathing in exterior plaster applications, two layers of a water-resistive barrier must be applied over sheathing in accordance with IBC Section 2510.6 or IRC Section R703.6.3. For cementitious coatings or exterior insulation and finish systems, application must be in accordance with the evaluation report on the exterior coating.

4.3 Air Barrier Material:

When used as an air barrier, the products must be installed in accordance with the manufacturer's published installation instructions and this report.

4.4 Wall Covering Assembly with Drainage:

The assembly described in this section complies with Section 4.5 of the ICC-ES Acceptance Criteria for EIFS Clad Drainage Wall Assemblies (AC235) and Section 3.2.10 of the ICC-ES Acceptance Criteria for Cementitious Exterior Wall Coatings (AC11). The assembly is limited to Type V construction, and may be used in Group R, Division 1 and 3, Occupancies. The system consists of minimum $7/16$ -inch-thick (11.1 mm) Exterior or Exposure 1 plywood or Exposure 1 oriented strand board applied to wood studs spaced a maximum of 16 inches (406 mm) on center and fastened in accordance with the requirements of Chapter 23 of the IBC or Chapter 6 of the IRC. Vertical board edges must butt over studs. DuPont™ Tyvek® StuccoWrap®–Style 1062X, DuPont™ Tyvek® DrainWrap™–Style 1063X or DuPont™ Tyvek®

CommercialWrap® D-Style 1083 must be applied as described in Section 4.2. For EIFS, minimum 1-inch-thick (25.4 mm) flat or grooved face Type I expanded polystyrene (EPS) foam plastic boards, recognized in a current ICC-ES evaluation report as complying with ASTM C 578, are placed over the Tyvek® StuccoWrap®, Tyvek® DrainWrap™ or Tyvek® CommercialWrap® D and fastened to the sheathing along the EPS edges and midway between the horizontal edges. The fastener spacing must not exceed 24 inches (610 mm) on center along the EPS edges. For midway locations, the fastener spacing must not exceed 16 inches (406 mm) on center and fasteners must be located within 16 inches (406 mm) of the horizontal edges. Fasteners consist of wood screws sized to meet wind resistance requirements, with minimum $1\frac{3}{4}$ -inch-diameter (45 mm) plates or washers, and penetrating a minimum of $\frac{1}{4}$ inch (6.4 mm) through the sheathing Weep screeds, as set forth in IBC Section 2512.1.2 or IRC Section R703.6.2.1, must be installed. The EIFS base coat, fabric and finish coat must be installed over the EPS in accordance with the EIFS manufacturer's ICC-ES evaluation report. The one-coat stucco system must be installed in accordance with the manufacturer's ICC-ES evaluation report.

5.0 CONDITIONS OF USE

The DuPont™ Tyvek® products described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The products must be installed in accordance with the manufacturer's published installation instructions, the requirements of the applicable code and this report. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.2 The water-resistive barriers must be covered by an exterior wall finish complying with the requirements of the applicable code.
- 5.3 When DuPont™ Tyvek® StuccoWrap®–Style 1062X, DuPont™ Tyvek® DrainWrap™–Style 1063X or DuPont™ Tyvek® CommercialWrap® D-Style 1083 are used in an EIFS wall covering assembly with drainage or a one-coat stucco assembly as described in Section 4.4, the assembly must be specifically recognized in the evaluation report on the EIFS or one-coat stucco.
- 5.4 This report provides air leakage rates for the products as an air barrier material only. The design and evaluation of the air barrier assembly of which they are a component is outside the scope of this report.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated October 2009.
- 6.2 Data in accordance with Section 4.10 of the ICC-ES Acceptance Criteria for EIFS Clad Drainage Wall Assemblies (AC235), dated October 2009.
- 6.3 Report of testing in accordance with ASTM E 84.
- 6.4 Reports of testing in accordance with ASTM E 2178.

7.0 IDENTIFICATION

The products described in this report are identified by a label on the container of each roll of membrane, and by printing on the product that includes the report holder's name, address, and telephone number; the product name; and the evaluation report number (ESR-2375).

8.0 OTHER CODES

8.1 Evaluation Scope:

In addition to the codes referenced in Section 1.0, the products covered in this report were evaluated for compliance with the requirements of the following codes:

- 2006 *International Building Code*[®] (2006 IBC)
- 2006 *International Residential Code*[®] (2006 IRC)
- 2006 *International Energy Conservation Code*[®] (2006 IECC)
- 2003 *International Building Code*[®] (2003 IBC)
- 2003 *International Residential Code*[®] (2003 IRC)
- 2003 *International Energy Conservation Code*[®] (2003 IECC)
- 1999 *BOCA National Building Code*[®] (BNBC)
- 1999 *Standard Building Code*[®] (SBC)
- 1997 *Uniform Building Code*[™] (UBC)

8.2 Uses

See Section 2.0, with the following modification for the UBC: The products are also equivalent to a Grade D paper as described in UBC Section 2506.4, with a 60-minute water-resistance rating.

8.3 Description

See Section 3.0.

8.4 Installation

See Section 4.0, except for the following modification for the UBC: When use is over wood-based sheathing in exterior plaster applications, two layers of a water-resistive barrier must be applied over sheathing in accordance with UBC Section 2506.4.

8.5 Conditions of Use

See Section 5.0.

8.6 Evidence Submitted

See Section 6.0.

8.7 Identification

See Section 7.0.