

ICC-ES Evaluation Report

ESR-1993

Reissued August 1, 2011

This report is subject to renewal in two years

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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® THERMAWRAP™ (STYLES 3480M AND 3583M)

1.0 EVALUATION SCOPE
Compliance with the following codes:

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)
- 2009 and 2006 *International Energy Conservation Code*® (IECC)
- 1997 *Uniform Building Code*™ (UBC)

Properties evaluated:

- Water resistance
- Air leakage
- Surface burning characteristics

2.0 USES

DuPont™ Tyvek® ThermaWrap™ (Styles 3480M And 3583M) is used as a water-resistive barrier on the exterior side of exterior walls of buildings of all construction types (IBC and UBC) and construction permitted under the IRC. DuPont™ Tyvek® ThermaWrap™ is an alternative to the water-resistive barrier specified in IBC Section 1404.2, UBC Section 1402.1 and IRC Section R703.2. The product is also considered equivalent to a 60-minute Grade D paper in accordance with Section 2510.6 of the IBC, Section R703.6.3 of the IRC and Section 2506.4 of the UBC, and may be used to provide an air barrier in accordance with IRC Section N1102.4.1 and IECC Sections 402.4.1 and 502.4.3.

3.0 DESCRIPTION

DuPont™ Tyvek® ThermaWrap™ is a nonwoven, spun bonded, nonperforated, white-colored polyethylene with an aluminum coating on one face available in two styles, Style 3480M And Style 3583M. The sheet has a nominal thickness of 0.010 inch (0.25 mm) and a basis weight of 2.4 oz/yd² (81 g/m²). The sheet is available in rolls of varying size. The product logo may appear on either side.

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 to provide an air barrier in accordance with IRC Section N1102.4.1 and IECC Section 402.4 or 502.4.

The Style 3583M sheet demonstrates Class A performance in accordance with IBC Section 803.1.1 based on data in accordance with ASTM E 84, and may be installed on walls required to be constructed of noncombustible materials.

4.0 INSTALLATION

DuPont™ Tyvek® ThermaWrap™ (Styles 3480M And 3583M) is installed after wall framing is completed and before or after windows and doors are installed. The roll must be placed a minimum of 6 to 12 inches (152 to 305 mm) beyond the starting corner and fastened with either corrosion-resistant nails having minimum 3/8-inch-diameter (9.5 mm) heads or plastic washer heads or corrosion-resistant staples with minimum 1-inch (25.4 mm) wide crowns. The wrap is unrolled around the building and fastened with nails or staples spaced between 12 and 18 inches (305 to 457 mm) on center at each vertical stud line. Either surface may be installed facing the exterior. A minimum overlap of 6 inches (152 mm) must be provided for both vertical and horizontal seams and the seams are taped with either 2- or 3-inch-wide (51 to 76 mm) DuPont™ Tyvek® Metalized Tape. When use is over wood-based sheathing in exterior plaster applications in jurisdictions enforcing the IBC or IRC, two layers of water-resistive barrier must be applied over the sheathing in accordance with IBC Section 2510.6 or IRC Section R703.6.3, as applicable; and in jurisdictions enforcing the UBC, two layers of product or one layer of product and another layer of an approved water-resistive barrier must be applied over the wood-based sheathing in accordance with UBC Section 2506.4. For cementitious coatings or exterior insulation and finish systems, application must be in accordance with the ICC-ES evaluation report on the exterior coating.

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

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. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

5.0 CONDITIONS OF USE

The DuPont™ Tyvek® ThermaWrap™ (Styles 3480M And 3583M) 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** The system must be manufactured, identified and installed in accordance with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, the more restrictive governs.
- 5.2** The product must be covered after application with an approved exterior wall covering complying with the applicable code.

- 5.3** This report provides air leakage rates for the product as a component of an air barrier only. The design and evaluation of the air barrier assembly of which this is a component must be provided to the satisfaction of the code official.

6.0 EVIDENCE SUBMITTED

- 6.1** Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated June 2011.
- 6.2** Report of optional testing in accordance with ASTM E 2178.
- 6.3** Report of optional testing in accordance with ASTM E 84.

7.0 IDENTIFICATION

The DuPont™ Tyvek® ThermaWrap™(Styles 3480M And 3583M) described in this report must be identified by a label, on the wrapper, package or container of each roll, bearing the manufacturer's name (E.I. DuPont de Nemours and Company, Inc.), the product name, the manufacturing location (Luxembourg), and the evaluation report number (ESR-1993).