



ICC-ES Evaluation Report ESR-1404

Reissued November 2020

Revised April 2022

This report is subject to renewal November 2022.

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:

FIBERWEB, INC.

ADDITIONAL LISTEE:

CERTAINTED CORPORATION

EVALUATION SUBJECT:

TYPAR® BUILDINGWRAP, TYPAR® METROWRAP™, TYPAR® DRAINABLE WRAP, TYPAR® DRAINABLE WRAP PEEL AND STICK AND CERTAWRAP™ WEATHER RESISTANT BARRIERS (PRIVATE LABEL I)

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2021, 2018, 2015 and 2012 *International Building Code®* (IBC)
- 2021, 2018, 2015 and 2012 *International Residential Code®* (IRC)
- 2021, 2018, 2015 and 2012 *International Energy Conservation Code®* (IECC)

Properties evaluated:

- Surface-burning characteristics
- Water-resistance
- Air leakage
- Exterior walls of Type I, II, III and IV construction

1.2 Evaluation to the following green codes and/or standards:

- 2019 *California Green Building Standards Code* (CALGreen), Title 24, Part 11
- 2021, 2018, 2015 and 2012 *International Green Construction Code®* (IgCC)

- 2020, 2017, 2014 and 2011 *ANSI/ASHRAE/USGBC/IES Standard 189.1—Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings*
- 2020, 2015 and 2012 *ICC 700 National Green Building Standard™* (ICC 700-2020, ICC 700-2015 and ICC 700-2012)

Attributes verified:

- See Section 3.0

2.0 USES

Typar® BuildingWrap, Typar® MetroWrap™ and CertaWrap™ Weather Resistant Barriers are used as water-resistive barriers on the exterior side of exterior walls of buildings of all construction types under the IBC and construction permitted under the IRC. Under the IBC for Types I, II, III and IV construction of buildings greater than 40 feet (12.2 m), see Section 4.3.1.

Typar® Drainable Wrap and Typar® Drainable Wrap Peel and Stick are used as a water-resistive barrier on the exterior side of exterior walls of buildings and construction permitted under the IRC. Under the IBC for Types I, II, III, and IV construction of buildings greater than 40 feet (12.2 m), see Section 4.3.2.

Typar® BuildingWrap, Typar® MetroWrap™, Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick and CertaWrap™ are also equivalent to Grade D building paper in accordance with Section 2510.6 of the 2021 IBC (the exception to Section 2510.6 of the 2012 IBC), and Section R703.7.3 of the 2021, 2018 and 2015 IRC (2012 IRC Section R703.6.3). All products may be used as air barrier materials under IRC Section N1102.4.1 and 2021, 2018 and 2015 IECC Sections C402.5 and R402.4 (2012 IECC Sections C402.4 and R402.4).

3.0 DESCRIPTION

Typar® BuildingWrap and CertaWrap are nonwoven, nonperforated, polypropylene materials with a nominal thickness of 11 mils [0.011 inch (0.279 mm)] and a basis weight of 2.8 ounces per square yard (95 g/m²).

Typar® MetroWrap™ is a nonwoven, nonperforated, polypropylene material with a nominal thickness of 13.7 mils [0.0137 inch (0.348 mm)] and a basis weight of 3.5 ounces per square yard (119 g/m²).

Typar® Drainable Wrap is a nonwoven, nonperforated, polypropylene material with a nominal thickness of 30 mils [0.03 inch (0.762 mm)] and a basis weight of 3.0 ounces per square yard (102 g/m²).

Typar® Drainable Wrap Peel and Stick is identical to the Typar® Drainable Wrap product except that it is backed with an acrylic adhesive and a release film; the product has a nominal thickness of 22 mils [0.022 inch (0.56 -mm)].

All products are available in rolls of varying size.

Typar® BuildingWrap, Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick, Typar® MetroWrap™ and CertaWrap™ have a flame-spread index of less than 25 and a smoke-developed index of less than 450 when tested in accordance with ASTM E84 (UL 723).

When used as an air barrier material, the membranes have an air leakage rate not exceeding 0.02 L/(S·M²) at 75 Pa [0.004 cfm/ft² at 0.3 w.g. (1.57 psf)].

The attributes of the Typar® BuildingWrap, Typar® MetroWrap™, Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick and CertaWrap™ Weather Resistant Barriers have been verified as conforming to the provisions of (i) CALGreen Section 5.407.1 for water-resistive barriers and Section A4.407.5 for air barriers; (ii) 2021 IgCC Section 701.3.1.2, 2018 IgCC Section 701.3.1.1 and 2012 and 2015 IgCC Section 605.1.2.1 for air barriers; (iii) 2020 ASHRAE 189.1 Section 7.3.1.2, 2017 and 2014 ASHRAE 189.1 Section 7.3.1.1 and 2011 ASHRAE 189.1 Section 7.4.2.9 for air barriers; (iv) ICC 700-20 Section 602.1.8, 11.602.1.8, 1202.6 and 13.104.1.4, ICC 700-2015 Section 602.1.8, 11.602.1.8 and 12.6.602.1.8 and ICC 700-2012 Section 602.1.8, 11.602.1.8 and 12.5.602.1.8 for water-resistive barriers. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

4.0 INSTALLATION

4.1 Water-resistive Barrier:

Typar® BuildingWrap, Typar® MetroWrap™, Typar® Drainable Wrap and CertaWrap™ are installed after wall framing is completed and before windows and doors are installed. The roll is placed approximately 6 inches (152 mm) from the starting corner and fastened with corrosion-resistant cap staples or cap nails approved by the manufacturer and is then unrolled around the building and fastened as set forth in the manufacturer's published installation instructions. The printed side must be installed facing the outside. A minimum of 6 inches (152 mm) of overlap shall be provided for vertical seams and 2 inches (51 mm) for horizontal seams, except where the manufacturer's installation instructions specify a greater overlap dimension.

Typar® Drainable Wrap Peel and Stick is installed after wall framing is completed and before windows and doors are installed. The exterior wall surfaces must be dry and free of dirt, dust or other foreign matter that would inhibit proper adhesion. Installation is limited to plywood, OSB, vinyl and aluminum substrates. Typar® Drainable Wrap Peel and Stick must be applied when the ambient air and surface temperatures are above 50°F (10°C) and below 176°F (80°C). The membrane is installed horizontally over the substrate in accordance with the applicable code. The membrane must be installed with a minimum of 2-inch (50.8 mm) sidelaps and 2-inch (50.8 mm) headlaps.

When use is over wood-based sheathing in exterior plaster applications, two layers of product must be applied over sheathing in accordance with 2012 IBC Section 2510.6 or 2018 and 2015 IRC Section R703.7.3 (2012 IRC Section R703.6.3), as applicable.

When used over wood based sheathing in exterior plaster applications in accordance with 2021 IBC Section 2510.6 and 2021 IRC Section R703.7.3 installations must be as follows:

- For dry climate zones (B) in accordance with 2021 IBC Section 2510.6.1 or 2021 IRC Section R703.7.3.1, the product must be applied in accordance with 2021 IBC Section 2510.6.1 Item 1 and 2021 IRC Section R703.7.3.1 Item 1, as applicable.

- For moist climate zones (A) or marine climate zones (C) in accordance with 2021 IBC Section 2510.6.2 or 2021 IRC Section R703.7.3.2, the product must be applied in accordance the dry climate zone (B) provisions noted above and with the additional requirements noted in 2021 IBC Section 2510.6.2 Item 1 or 2021 IRC Section R703.7.3.2 Item 1, as applicable.

For cementitious coatings or exterior insulation and finish systems, application must be in accordance with the evaluation report on the exterior coating.

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.

4.2 Air Barrier Material:

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

4.3 Exterior Walls of Types I, II, III and IV construction:

The water-resistive barriers may be used as a component of exterior walls on buildings of Types I, II, III or IV construction as follows:

4.3.1 Typar® BuildingWrap, Typar® MetroWrap™ and CertaWrap™: Under the IBC, Typar® BuildingWrap, Typar® MetroWrap™ and CertaWrap™ water-resistive barriers have been evaluated for use on exterior walls of buildings of any height above grade when the wall assembly complies with Table 1; the water-resistive barriers may also be installed on exterior walls of buildings of any height above grade when the wall assembly complies with exception 1 of 2021 and 2018 IBC Section 1402.5 (exception 1 of in 2015 IBC Section 1403.5).

4.3.2 Typar® Drainable Wrap and Typar® Drainable Wrap Peel and Stick: Under the IBC, Typar® Drainable Wrap and Typar® Drainable Wrap Peel and Stick water-resistive barriers have been evaluated for use on exterior walls of buildings not greater than 40 feet (12.2 m) above grade; the water-resistive barriers may be installed on exterior walls of buildings of any height above grade when the wall assembly complies with exception 1 of 2021 and 2018 IBC Section 1402.5 (exception 1 of in 2015 IBC Section 1403.5).

5.0 CONDITIONS OF USE

The Typar® BuildingWrap, Typar® MetroWrap™, Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick and CertaWrap™ Weather Resistant Barrier products described in this report comply with, or are suitable alternates to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with this report and the manufacturer’s published installation instructions. In the event of conflict between the manufacturer’s instructions and this report, this report governs.
- 5.2 The water-resistive barrier must be covered by an exterior wall finish complying with the requirements of the applicable code.
- 5.3 Use on exterior walls of buildings of Types I, II, III and IV construction must be in accordance with Section 4.3 and Table 1 for the applicable edition of the IBC.
- 5.4 The product is manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), approved August 2016 (editorially revised July 2021).
- 6.2 Report of testing in accordance with ASTM E84 (UL 723).
- 6.3 Reports of testing in accordance with ASTM E2178.
- 6.4 Report of testing in accordance with NFPA 285 and supporting fire analysis.

7.0 IDENTIFICATION

- 7.1 The Typar® BuildingWrap, Typar® MetroWrap™, Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick and CertaWrap™ products are identified by

a label, on the container of each roll of membrane, bearing the company name (Fiberweb, or CertainTeed Corporation), the product name, the manufacturing location (Old Hickory, TN), and the evaluation report number (ESR-1404).

- 7.2 The report holder’s contact information is the following:

FIBERWEB, INC.
70 OLD HICKORY BOULEVARD
OLD HICKORY, TENNESSEE 37138
(615) 847-7000
www.typar.com

- 7.3 The Additional Listee’s contact information is the following:

CERTAINTEED CORPORATION
20 MOORES ROAD
MALVERN, PENNSYLVANIA 19355

TABLE 1—NFPA 285 WALL ASSEMBLY

I. Base Wall System (Use either 1, 2 3 or 4)	1. Concrete Wall
	2. Concrete Masonry Wall (CMU)
	3. Standard Clay Brick Wall
	4. Steel Stud Framed Wall (Use a, b, c, or d, as applicable) – Minimum 20-gauge, 3 ⁵ / ₈ -inch-deep, studs with lateral bracing every 4 feet vertically, spaced 24 inches on center maximum
	a. Interior Wallboard – Minimum of 1 layer of 5/ ₈ -inch-thick Type X gypsum wallboard on interior face of studs
	b. Cavity Insulation – None
	c. Floorline Firestopping – (where studs are outboard of the floor assembly): 4 lb/ft ³ mineral wool in each stud cavity and at each floorline – attached with Z-clips
d. Exterior Sheathing – minimum 1 layer of 1/ ₂ -inch-thick, exterior glass-mat gypsum sheathing complying with ASTM C1177	
II. Air and Water Barrier Applied to I. Base Wall Systems 1, 2, 3 or 4	1. Typar® BuildingWrap, Typar® MetroWrap™ and CertaWrap™
III. Exterior Insulation¹	1. None
IV. Exterior Cladding²	1. Brick: Standard nominal 4-inch thick clay brick. Use standard brick veneer anchors installed maximum 24 inches on center vertically on each stud with a 2-inch maximum air gap between exterior insulation and brick.

For SI: 1 inch = 25.4 mm; 1 lb/ft³ = 16 kg/m³

Notes:

¹ Use minimum 24 gauge (0.033-inch thick) galvanized steel flashing around all window and door openings in the exterior wall.

² Exterior cladding must comply with the applicable provisions of IBC Chapter 14 and IRC Chapter 7.

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The purpose of this evaluation report supplement is to indicate that the Typar® BuildingWrap, Typar® MetroWrap™, Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick and CertaWrap™ Weather Resistant Barriers, described in ICC-ES evaluation report ESR-1404, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2019 *California Residential Code* (CRC)
- 2019 *California Energy Code* (CEC)

2.0 CONCLUSIONS**2.1 CBC:**

The Typar® BuildingWrap, Typar® MetroWrap™, Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick and CertaWrap™ Weather Resistant Barriers, described in Sections 2.0 through 7.0 of the evaluation report ESR-1404, comply with CBC Chapter 14, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report ESR-1404. Use as an air barrier must be in accordance with the CEC.

2.1.1 OSHPD: The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA: The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Typar® BuildingWrap, Typar® MetroWrap™, Typar® Drainable Wrap and CertaWrap™ Weather Resistant Barriers, described in Sections 2.0 through 7.0 of the evaluation report ESR-1404, comply with CRC Chapter 7, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report ESR-1404 and the applicable provisions of the CRC. Use as an air barrier must be in accordance with the CEC.

This supplement expires concurrently with the evaluation report ESR-1404, reissued November 2020 and April 2022.

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Applicable code editions:

- 2020 *Florida Building Code—Building*
- 2020 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The Typar® BuildingWrap, Typar® MetroWrap™ Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick and CertaWrap™ Weather Resistant Barriers, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-1404, comply with the 2020 *Florida Building Code—Building* and the 2020 *Florida Building Code—Residential*. The design requirements shall be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-1404 for the 2018 *International Building Code*® meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable.

Use of the Typar® BuildingWrap, Typar® MetroWrap™ Typar® Drainable Wrap, Typar® Drainable Wrap Peel and Stick and CertaWrap™ Weather Resistant Barriers has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* or the *Florida Building Code—Residential*.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

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