



ICC-ES Evaluation Report

ESR-2416

Reissued August 2023

Revised April 2024

This report is subject to renewal June 2025.

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.

EVALUATION SUBJECT:

SURROUND™ HOUSEWRAP B, W AND G AND IRON CLAD BY TYPAR

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2021, 2018, 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2021, 2018, 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Water resistance
- Air leakage

1.2 Evaluation to the following green code(s) and/or standards:

- 2022 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2020, 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

See Section 3.0

2.0 USES

Surround™ Housewrap B, W and G and Iron Clad by Typar are used as water-resistive barriers on the exterior side of exterior walls of buildings of Type V-B construction and construction permitted under the IRC. The Surround™

Housewrap B, Surround™ Housewrap W and Iron Clad by Typar are also equivalent to Grade D paper as described in Section 2510.6 of the 2021 IBC (Section 2510.6 of the 2012, 2009 and 2006 IBC) and 2021, 2018, and 2015 IRC Section R703.7.3 [2012, 2009 and 2006 IRC Section R703.6.3].

The Surround™ Housewraps and Iron Clad by Typar may be used as an air barrier material in accordance with IRC N1102.4.1 and 2021, 2018, and 2015 IECC Sections C402.5 and R402.4 [2012 IECC Sections C402.4 and R402.4 (2009 and 2006 IECC Sections 402.4 and 502.4)].

3.0 DESCRIPTION

Surround™ Housewrap B, W and G and Iron Clad by Typar are a nonwoven, nonperforated, polyolefin material with a basis weight of 0.22 ounce per square foot (72 g/m²) and are produced in rolls of varying sizes. The only difference between the products is color. Surround™ Housewrap B and Iron Clad by Typar are black, Surround™ Housewrap W is white and Surround™ Housewrap G is gray.

The surround Housewraps and Iron Clad by Typar have an air leakage rate not exceeding 0.02 L/s-m² at 75 Pa [0.004 cfm/ft² at 0.3 inch w.g. (1.57 psf)] when used as an air barrier material 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 (2009 and 2006 IECC Sections 402.4 and 502.4)]. The attributes of the water-resistive barriers have been verified as conforming to the provisions of (i) CALGreen Section 5.407.1; (ii) ICC 700-2020 Sections 602.1.8, 11.602.1.8, 1202.6 and 13.104.1.4; (iii) ICC 700-2015 Sections 602.1.8, 11.602.1.8 and 12.6.602.1.8; (iv) ICC 700-2012 Sections 602.1.8, 11.602.1.8 and 12.5.602.1.8; and (v) ICC 700-2008 Section 602.9 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 General:

Surround™ Housewrap and Iron Clad by Typar are installed after wall framing is completed and before windows and doors are installed, except in locations where the authority having jurisdiction requires the wrap to be installed

afterwards. The roll is placed a minimum of 6 inches (152 mm) from the starting corner and fastened to the sheathing with corrosion-resistant nails having minimum 1-inch-diameter (25.4 mm) plastic washer heads or cap heads, spaced at a minimum of 16 inches (406 mm) vertically; and is then unrolled around the building and fastened with nails or staples spaced between 16 and 24 inches (406 to 610 mm) on center at top and bottom sill plates and at framing members. The printed side is installed facing the outside. A minimum of 6 inches (102 mm) of overlap must be provided for vertical seams and 2 inches (152 mm) for horizontal seams, except where the manufacturer's installation instructions specify a greater overlap dimension.

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 with 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.

When use is over wood-based sheathing in exterior plaster applications, the product must be applied in two layers over sheathing in accordance with 2012, 2009 and 2006 IBC Section 2510.6 or 2018 and 2015 IRC Section R703.7.3 [2012, 2009 and 2006 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.

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.

4.2 Air Barrier Material:

The Surround™ Housewraps and Iron Clad by Typar, when used as an air barrier material, must be installed in accordance with the manufacturer's published installation instructions and this report.

5.0 CONDITIONS OF USE

The Surround™ Housewrap and Iron Clad by Typar membranes 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 report holder's published installation instructions and this report must be strictly adhered to. In the event of conflict between this report and the report holder's published installation instructions, this report governs.
- 5.2** The membranes are limited to use on buildings of Type V-B construction (IBC) and construction permitted by the IRC.
- 5.3** The membranes must not be installed where ASTM E2556 type I or II building paper is required.
- 5.4** The product must be covered after application with an approved exterior wall covering complying with the applicable code.
- 5.5** This report is based on air leakage rates for the products as an air barrier material only. The design and evaluation of the air barrier assembly, of which the products are a component, is outside the scope of this report.
- 5.6** 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), dated August 2016 (editorially revised July 2021).
- 6.2** Reports of air leakage testing in accordance with ASTM E2178.

7.0 IDENTIFICATION

- 7.1** The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-2416) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2** In addition, the Surround™ Housewraps and Iron Clad by Typar described in this report are identified by a label on the container of each roll of membrane and by printing on the product, bearing the report holder's name (Fiberweb), address, and telephone number; the manufacturing location (Old Hickory, Tennessee); the product name; and the evaluation report number (ESR-2416).
- 7.3** The report holder's contact information is the following:

FIBERWEB, INC.
70 OLD HICKORY BOULEVARD
OLD HICKORY, TENNESSEE 37138
(615) 847-7124
www.typar.com

ICC-ES Evaluation Report

ESR-2416 CBC and CRC Supplement

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1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Surround™ Housewrap B, W and G and Iron Clad by Typar, described in ICC-ES evaluation report ESR-2416, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2022 California Building Code (CBC)

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

- 2022 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Surround™ Housewrap B, W and G and Iron Clad by Typar, described in Sections 2.0 through 7.0 of the evaluation report ESR-2416, comply with CBC Chapter 14, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapter 14 and 25, as applicable.

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 Surround™ Housewrap B, W and G and Iron Clad by Typar, described in Sections 2.0 through 7.0 of the evaluation report ESR-2416, comply with CRC Chapters 3 and 7, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapters 3 and 7, as applicable.

This supplement expires concurrently with the evaluation report, reissued August 2023 and revised April 2024.