

ICC-ES Evaluation Report

ESR-3727

Reissued May 2025

This report also contains:


- [CA Supplement](#)

Subject to renewal May 2026

- [FL Supplement](#)

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<p>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</p> <p>Section: 07 25 00— Water-Resistive Barriers/Weather Barriers</p> <p>Section: 07 27 00—Air Barriers</p>	<p>REPORT HOLDER: CERTAINTEED LLC</p>	<p>EVALUATION SUBJECT: VYCOR® ENV-S™</p>	
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1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2024, 2021, 2018, 2015 and 2012 [International Building Code® \(IBC\)](#)
- 2024, 2021, 2018, 2015 and 2012 [International Residential Code® \(IRC\)](#)
- 2024, 2021, 2018, 2015, 2012 and 2009 [International Energy Conservation Code® \(IECC\)](#)

Main references of this report are for the 2024 IBC, IRC, and IECC. See [Tables 1, 2, and 3](#) for applicable sections of the code for previous IBC, IRC, and IECC editions.

Properties evaluated:

- Water resistance
- Air barrier
- Surface-burning characteristics

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

- 2022 [California Green Building Standards Code \(CALGreen\)](#), Title 24, Part 11
- 2024, 2021, 2018, 2015 and 2012 [International Green Construction Code® \(IgCC\)](#)
- 2023, 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, 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 2.0.

2.0 USES

Vycor® enV-S™ is a self-adhering membrane used as a water-resistive barrier on the exterior side of exterior walls of buildings of any construction type under the IBC and construction permitted under the IRC. Under the

2024, 2021, 2018, 2015 and 2012 IBC, the water-resistive barriers may be used on buildings of Types I, II, III, or IV construction on buildings that are not greater than 40 feet (12.2 m) in height above grade plane in accordance with the 2024 IBC Section 1402.6, except as permitted under Exception 1 of the 2024 IBC Section 1402.6.

The membrane is considered equivalent to Grade D paper as described in 2024 IBC Section 2510.6 and 2024 IRC Section R703.7.3, with a 60-minute water-resistance rating. The membrane may be used as an air barrier material under 2024 IRC Section N1102.5.1 and 2024 IECC Sections C402.6 and R402..

3.0 DESCRIPTION

The Vycor enV-S membrane consists of an engineered polymeric-based sheet with a factory-applied adhesive and release film on the backside.

Vycor® enV-S™ has a nominal thickness of 0.015 inch (0.381 mm) and is supplied in rolls having varying lengths and widths. The rolls must not be stored at temperatures above 90°F (32.2°C) or below 40°F (4.4°C) for extended periods.

Vycor® enV-S™ has a flame-spread index of 25 or less and a smoke-developed index of 450 or less, when tested in accordance with ASTM E84.

Vycor® enV-S™ has 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)] when used as an air barrier material under 2024 IRC Section N1102.5.1 and 2021, 2018 and 2015 IECC Sections C402.5 and R402.5 [2012 IECC Sections C402.4 and R402.4 (2009 IECC Sections 402.4 and 502.4)].

The attributes of the self-adhering membrane have been verified as conforming to the provisions of (i) CALGreen Section 5.407.1 for water-resistive barriers; (ii) 2024 and 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) 2023 and 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 700-2020 Sections 602.1.8, 11.602.1.8, 1202.6 and 13.104.1.4, ICC 700-2015 Sections 602.1.8, 11.602.1.8 and 12.6.602.1.8, ICC 700-2012 Sections 602.1.8, 11.602.1.8 and 12.5.602.1.8 and 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 DESIGN AND INSTALLATION

4.1 General:

Installation of Vycor® enV-S™ must comply with this report and the report holder's published installation instructions. The report holder's published installation instructions must be available at the jobsite at all times during the installation.

Prior to installation of the membrane, all surfaces must be sound, dry, clean and free of oil, grease, dirt, excess mortar, loose nails and other protrusions and other contaminants that would be detrimental to adhesion of the membrane. The membrane must be installed only when the ambient air and substrate temperatures are at least 40°F (5°C).

4.2 Water-Resistive Barrier:

When installed as a water-resistive barrier, the membrane must be installed over the exterior face of the exterior wall sheathing. The membrane must be applied horizontally or vertically to the wall substrates. All vertical and horizontal laps must be overlapped a minimum of 2 inches (51 mm) and all laps must be water-shedding. The membrane must be pressed firmly into place with a hand roller as soon as possible, ensuring continuous and intimate contact with the substrate. The installation must be made continuous at all framed openings, such as windows, doors, etc.

When use is over wood-based sheathing in exterior plaster applications, the installation must be 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 use is over wood-based sheathing in exterior plaster applications in accordance with 2024 and 2021 IBC Section 2510.6 or 2024 and 2021 IRC Section R703.7.3, installation must be as follows:

- For dry climate zones (B) in accordance with 2024 and 2021 IBC Section 2510.6.1 or 2024 and 2021 IRC Section R703.7.3.1, the product must be applied in accordance with 2024 and 2021 IBC Section 2510.6.1 Item 1 or 2 or 2024 and 2021 IRC Section R703.7.1 Item 1 or 2, as applicable.

- For moist climate zones (A) or marine climate zones (C) in accordance with 2024 and 2021 IBC Section 2510.6.2 or 2024 and 2021 IRC Section R703.7.2, the product must be applied in accordance with the climate zone (B) provisions noted above and with the additional requirements noted in 2024 and 2021 IBC Section 2510.6.2 Item 1 or 2024 and 2021 IRC Section R703.7.3.2 Item 1, as applicable.

For cementitious coatings or exterior insulation and finish systems, installation of the barrier must be in accordance with the current ICC-ES evaluation report on the exterior coating.

4.3 Air Barrier:

When used as an air barrier under 2024 IRC Section N1102.5. and 2024 IECC Sections C402.6 and R402.5, the membrane must be installed in accordance with the report holder's published installation instructions and this report.

5.0 CONDITIONS OF USE:

The Vycor® enV-S™ 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 Installation must comply with the requirements of the applicable code, this report and the report holder's published installation instructions. In the event of conflicts between this report and the report holder's instructions, this report governs.
- 5.2 The membrane must be covered by an exterior wall covering complying with the requirements of the applicable code.
- 5.3 The air leakage rate noted in Section 3.0 is for the membrane used as an air barrier material only. The design and evaluation of an air barrier assembly, of which the membrane is a component, is outside the scope of this report.
- 5.4 The products must not be installed where ASTM E2556 Type I or II building paper is required.
- 5.5 For installation on exterior walls on buildings of Type I, II, III, IV construction:
 - Under the 2024, 2021, 2018 and 2015 IBC, use is limited to buildings that are maximum 40 feet (12.2 m) in height above grade plane, except as permitted under Exception 1 of 2024 IBC Section 1402.6, 2021 and 2018 IBC Section 1402.5 and 2015 IBC Section 1403.5.
 - Under the 2012 IBC, use is limited to buildings that are maximum 40 feet (12.2 m) in height above grade plane
- 5.6 The products are 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 of Water-resistive Barriers \(AC38\)](#), dated August 2016 (editorially revised June 2024).
- 6.2 Reports of surface burning characteristics testing in accordance with ASTM E84.
- 6.3 Reports of air leakage testing in accordance with ASTM E2178.

7.0 IDENTIFICATION

- 7.1 Vycor® enV-S™ membrane is identified by a label on the container of each roll of membrane, and by printing at regular intervals on the membrane, which include the report holder's name (CertainTeed LLC) and address, the product name (Vycor® enV-S™), and the evaluation report number (ESR-3727).
- 7.2 The report holder's contact information is the following:

CERTAINTEED LLC
20 MOORES ROAD
MALVERN, PA 19355
(800) 233-8990
www.certainteed.com

TABLE 1 — APPLICABLE SECTIONS OF THE IBC UNDER EACH EDITION OF THE IBC

2024 IBC	2021 IBC	2018 IBC	2015 IBC	2012 IBC
1402.6	1402.5	1402.5	1403.5	1403.5
2510.6	2510.6	-	-	2510.6

TABLE 2— APPLICABLE SECTIONS OF THE IRC UNDER EACH EDITION OF THE IRC

2024 IRC	2021 IRC	2018 IRC	2015 IRC	2012 IRC
R703.7.3	R703.7.3	R703.7.3	R703.7.3	R703.6.3
N1102.5.1	N1102.4.1	N1102.4.1	N1102.4.1	N1102.4.1

TABLE 3— APPLICABLE SECTIONS OF THE IECC UNDER EACH EDITION OF THE IECC

2024 IECC	2021 IECC	2018 IECC	2015 IECC	2012 IECC	2009 IECC
C402.6	C402.5	C402.5	C402.5	C402.4	402.4
R402.5	R402.4	R402.4	R402.4	R402.4	502.4

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:

CERTAINTED LLC

EVALUATION SUBJECT:

VYCOR® ENV-S™

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Vycor® enV-S™, described in ICC-ES evaluation report ESR-3727, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2022 and 2019 *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 and 2019 *California Residential Code* (CRC)
- 2022 and 2019 *California Energy Code* (CEC)

2.0 CONCLUSIONS

2.1 CBC:

The Vycor enV-S membrane, described in Sections 2.0 through 7.0 of the evaluation report ESR-3727, complies with CBC Chapter 14 provided the design and installation are in accordance with the 2021 and 2018 *International Building Code*® (IBC) provisions, as applicable, noted in the evaluation report and the additional requirements of the CBC, as applicable. 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 Vycor enV-S membrane, described in Sections 2.0 through 7.0 of the evaluation report ESR-3727, complies with CRC Chapter 7, provided the design and installation are in accordance with the 2021 and 2018 *International Residential Code*® (IRC) provisions, as applicable, noted in the evaluation report and the additional requirements of the CRC, as applicable. Use of an air barrier must be in accordance with the CEC.

This supplement expires concurrently with the evaluation report, reissued May 2025.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 25 00—Water-Resistive Barriers/Weather Barriers
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REPORT HOLDER:

CERTAINTED LLC

EVALUATION SUBJECT:

VYCOR® ENV-S™

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Vycor® enV-S™, described in ICC-ES evaluation report ESR-3727, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2023 Florida Building Code—Building
- 2023 Florida Building Code—Residential

2.0 CONCLUSIONS

The Vycor enV-S membrane, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-3727, comply with the 2023 Florida Building Code—Building and the 2023 Florida Building Code—Residential. The design requirements must 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-3727 for the 2021 International Building Code® meet the requirements of the Florida Building Code—Building or the Florida Building Code—Residential, as applicable with the following exceptions:

1. The water-resistive barrier may be used on buildings of Types I, II, III, or IV construction on buildings that are not greater than 40 feet (12.2 m) in height above grade plane in accordance with the Florida Building Code—Building Section 1403.5, except as permitted under Exception 1 of the Florida Building Code—Building Section 1403.5,
2. The water-resistive barrier is considered equivalent to Grade D paper as described in Florida Building Code—Residential Section R703.7.3 When use is over wood-based sheathing in exterior plaster applications, the installation must be in accordance with Florida Building Code Residential Section R703.7.3.

Use of the Vycor enV-S membrane for compliance with the High-Velocity Hurricane Zone provisions of the Florida Building Code—Building or the Florida Building Code—Residential has not been evaluated, and is outside the scope of this supplemental report.

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). Florida Rule 61G20-3 is applicable to products and/or systems which comprise the building envelope and structural frame for compliance with the structural requirements of the Florida Building Code.

This supplement expires concurrently with the evaluation report, reissued May 2025.