

ICC-ES Evaluation Report

ESR-1232

Reissued January 2019

Revised May 2020

This report is subject to renewal January 2021.

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A Subsidiary of the International Code Council®

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 24 00—Exterior Insulation and Finish Systems

REPORT HOLDER:

DRYVIT SYSTEMS, INC.

EVALUATION SUBJECT:

DRYVIT OUTSULATION® SYSTEM

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *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.

For evaluation for compliance with codes adopted by Los Angeles Department of Building and Safety (LADBS), see [ESR-1232 LABC and LARC Supplement](#).

Properties evaluated:

PROPERTY	IBC CHAPTER	IRC CHAPTER
Exterior insulation and finish systems (EIFS)	14	R7
Weather resistance	14	R7
Fire-resistance-rated construction	7	R3
Special inspection	17	N/A
Structural – transverse wind load resistance	16	R6
Types I – IV (noncombustible) construction	26	N/A
Surface burning characteristics	26	R3
Ignition resistance	26	N/A

2.0 USES

The Dryvit Outsulation system is an exterior insulation and finish system (EIFS) complying with the 2018 IBC Section

1407 (the 2015, 2012, and 2009 IBC Section 1408) and IRC Section R703.9. The system may be used in fire-resistance-rated construction and any construction Type (IBC Types I through V), with the exception of framed walls of Type V construction in an R1, R2, R3 or R4 Occupancy Group. Under the IRC, the system is limited to use on concrete or masonry walls.

3.0 DESCRIPTION

3.1 System Components:

See Table 1.

3.2 Insulation Board:

Insulation boards must be one of the following:

- a. EPS Insulation Board, complying with ASTM C578, Type I, and ASTM E2430, produced by a molder with a current ICC-ES evaluation report, with a flame spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL723.
- b. EPS insulation board may be produced by a molder that participates in an approved third-party quality assurance program. The board must comply with ASTM C578, Type I, and ASTM E2430, have a flame spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL723, and be labeled in accordance with the code.
- c. Foam-Control EPS Boards, Type I - WSG, by AFM ([ESR-1006](#)).
- d. EWG EIFS, by Falcon Foam ([ESR-1962](#)).
- e. BASF Neopor® Type I Rigid Foam Insulation Boards (ESR-3463).

3.3 Substrates (see table 2):

- Gypsum sheathing complying with ASTM C1396 or ASTM C1177
- Fiber cement panels complying with the ICC-ES Acceptance Criteria for Fiber Cement Siding Used as Exterior Wall Siding (AC90), and ASTM C1186.
- Fiber cement panels complying with the ICC-ES Acceptance Criteria for Reinforced Cementitious Sheets Used as Wall and Ceiling Sheathing and Floor Underlayment (AC376), and ASTM C1325.
- Concrete-masonry complying with the code
- Concrete complying with the code
- Exterior plaster complying with the code

- Exposure 1 wood structural panels complying with DOC PS-1 or PS-2

- Brick masonry complying with the code

3.4 Sealants:

Sealants must comply with ASTM C920, Type S or M, minimum Grade NS, minimum Class 25 and Use O.

4.0 DESIGN AND INSTALLATION

4.1 General:

The Dryvit Outsulation System must be installed in accordance with the manufacturer's application instructions, specifications and installation details. These are available at:

www.dryvit.com/filesshare/doc/us/application/ds204.pdf

www.dryvit.com/filesshare/doc/us/specification/ds118.pdf

www.dryvit.com/filesshare/doc/us/detail/ds107.pdf

4.2 Drainage:

The Dryvit Outsulation System has not been qualified as an EIFS with drainage, as described in the 2018 IBC Section 1407.4.1 (2015, 2012 and 2009 IBC Section 1408.4.1) and IRC Section R703.9.2.

4.3 Wind Design:

Table 3 describes specific assemblies for which test data has been submitted. Other assemblies may be considered for approval by local officials based on testing and/or calculations by a registered design professional.

4.4 Weather Protection:

The Dryvit Outsulation System complies with the 2018 IBC Section 1404.2 (2015, 2012, and 2009 IBC Section 1403.2) and IRC Section R703.1.1.

4.5 Use in Types I through IV Construction:

Table 4 describes the assemblies qualified for use in Types I through IV construction.

4.6 Fire-resistance-rated Construction: See Table 5:

Table 5 describes the assemblies qualified for use in load-bearing and nonload-bearing-fire resistance-rated construction. In addition, in Type V construction, the Dryvit Outsulation System may be attached to the surface of combustible exterior fire-resistance-rated assemblies described in the 2018, 2015 and 2012 IBC Table 721.1(2) (2009 IBC Table 720.1(2)) without changing the assigned hourly rating of the assembly. The exterior wall must have a minimum 10-foot (3048 mm) separation distance from adjacent construction.

4.7 Special Inspection:

For recognition under the IBC, special inspections must be conducted in accordance with Sections 1704.2 and 1705.16.1 of the 2018 and 2015 IBC, Sections 1704.2 and 1705.15.1 of the 2012 IBC and Sections 1704.1 and 1704.14 of the 2009 IBC. Refer to the Dryvit Systems, Inc., Third Party Inspection Guidelines for Owners and General Contractors/Construction Managers:

www.dryvit.com/filesshare/doc/us/description/ds150.pdf

5.0 CONDITIONS OF USE

The Dryvit Outsulation System 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 this report, the manufacturer's published application instructions, installation details and the applicable code. In the event of a conflict between the manufacturers published installation instructions and this report, this report governs.
- 5.2 The insulation boards must be separated from the building interior by a thermal barrier complying with the applicable code.
- 5.3 Use in framed walls of Type V construction in Occupancy Groups R1, R2, R3 and R4 is not permitted. Under the IRC, construction is limited to concrete and concrete masonry construction.
- 5.4 Installation must be by a contractor listed by Dryvit Systems, Inc.
- 5.5 Termination of the system must not be less than 6 inches (152 mm) above finished grade in accordance with IBC Section 2603.8 and 2018 and 2015 IRC Section R318.4 and R703.9.1(5) (2012 and 2009 IRC Section R318.4).

6.0 EVIDENCE SUBMITTED

- 6.1 Reports of tests in accordance with ASTM E2568.
- 6.2 Data in accordance with the ICC-ES Acceptance Criteria for Exterior Insulation and Finish Systems (AC219), dated October 2009 (editorially revised April 2018).
- 6.3 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated June 2015 (Editorially revised October 2017).
- 6.4 Reports of tests in accordance with NFPA 285 and NFPA 268.

7.0 IDENTIFICATION

- 7.1 Each container or package of the coating or reinforcing mesh used as part of the Outsulation System must be labeled with the Dryvit Systems, Inc., name and address; the product name; lot or batch number; quantity of material; storage instructions; pot life; expiration date; and the evaluation report number (ESR-1232).

Foam plastic insulation must be labeled in accordance with the current ICC-ES evaluation report in which it is recognized, or as described in Section 3.2.

- 7.2 The report holder's contact information is as follows:

DRYVIT SYSTEMS, INC.
ONE ENERGY WAY
WEST WARWICK, RHODE ISLAND 02893
(401) 822-4100
www.dryvit.com

TABLE 1—COATING SYSTEM COMPONENTS¹

SYSTEM	WATER-RESISTIVE BARRIER	ADHESIVE	BASE COAT	REINFORCING MESH	FINISH
Dryvit Outsulation	NA	Dryvit ADEPS, or Dryvit Primus, or Dryvit Genesis, or Dryvit Genesis DM	Dryvit Primus, or Dryvit Genesis, or Dryvit Genesis DM, or NCB	Dryvit Standard Reinforcing Mesh, 4.3 oz/yd ² minimum ²	Dryvit DPR Finish or PMR Acrylic Finish

¹See Section 3.2 for Insulation Board.²Higher weight meshes are allowable.

TABLE 2—SUBSTRATES

ADHESIVE	SUBSTRATES
Dryvit ADEPS	All substrates noted in Section 3.3
Dryvit Primus	All substrates noted in Section 3.3 except plywood or OSB
Dryvit Genesis	All substrates noted in Section 3.3 except plywood or OSB
Dryvit Genesis DM	All substrates noted in Section 3.3 except plywood or OSB

TABLE 3—WIND LOAD DESIGN

FRAMING ³		SUBSTRATE	EPS			
Type	Max spacing		EPS Minimum Thickness (inch)	Coating	Allowable Wind Load ^{2,3} (psf)	
2x4 wood ¹	16" o.c.	¹ / ₂ -inch-thick gypsum sheathing complying with ASTM C1396 or ASTM C1177 or ¹ / ₂ -inch-thick wood structural panel; attached to framing with No. 6 self-drilling bugle-head S-12 drywall screws at 6 inches on center along studs. Fasteners must penetrate at least 1 inch into wood framing or through steel framing.	1	Dryvit Outsulation System as described in Table 1	40	55
³ / ₈ -inch by No. 18 gage-steel Minimum f _y = 33ksi						
2x4 wood ¹	16" o.c.	¹ / ₂ -inch-thick water-resistant core gypsum sheathing complying with ASTM C1396 or ASTM C1177 or ¹ / ₂ -inch-thick wood structural panel; attached to framing with No. 6 self-drilling bugle-head drywall screws at 4 inches on center along studs. Fasteners must penetrate at least 1 inch into wood framing or through steel framing.	1	Dryvit Outsulation System as described in Table 1	70	55
6-inch by No. 16 gage-steel Minimum f _y = 33ksi						
6-inch by No. 16 gage-steel Minimum f _y = 33ksi	16	Min. 2.5-pound-per-square-yard, diamond mesh metal lath over min. ¹ / ₂ -inch-thick, water-resistant core gypsum sheathing; attached to framing with No. 6 self-drilling bugle head drywall screws with ³ / ₁₆ -inch-diameter metal washers at 6 inches on center around the perimeter and a maximum of 10 inches on center in the field of the sheathing; fasteners must penetrate through steel framing	1	Dryvit Outsulation System as described in Table 1	60	60
6-inch by No. 18 gage-steel Minimum f _y = 33ksi	16	Min. 3.4-pound-per-square-yard, diamond mesh metal lath over min. ¹ / ₂ -inch-thick, water-resistant core gypsum sheathing; attached to framing with min. 0.16-inch-diameter self-tapping panhead screws at a max. of 6 inches on center; must penetrate through steel framing	1	Dryvit Outsulation System as described in Table 1	50	50
N/A	N/A	Concrete, concrete-masonry, or brick masonry	1	Dryvit Outsulation System as described in Table 1	70	See Note 2

For SI: 1 inch = 25.4 mm; 1 psf = 0.0479 kPa.

¹Minimum 2x4 wood framing, minimum specific gravity 0.42²Maximum positive pressure is limited to the capacity in Table 3, the capacity of the framing and structural sheathing, or concrete, masonry or portland cement plaster substrate, determined in accordance with the applicable code, whichever is lower.³The framing members must be designed to resist all positive and negative transverse design loads with a maximum allowable deflection of ¹/₂₄₀ of the span.

TABLE 4—ASSEMBLIES FOR USE IN TYPES I THROUGH IV CONSTRUCTION

FRAMING MEMBERS			INTERIOR SHEATHING ^{5,6}			EXTERIOR SHEATHING ⁵			MAXIMUM INSULATION BOARD THICKNESS (INCHES)	ASSEMBLY
Metal		Max Spacing	Type	Min. Thickness (inch)	Max. Fastener Spacing (inches o.c.)	Type	Min. Thickness (inch)	Max. Fastener Spacing (inches o.c.)		
Min. Depth (in.)	Min. Gage									
3 ⁵ / ₈	No. 18 (0.0428 inch)	16" o.c.	ASTM C36 or ASTM C1396 Type X	1 ¹ / ₂	12 ¹	ASTM C1396	1 ¹ / ₂	12 ¹	13	Adhesive: Primus Base Coat; Primus Finish Coat; any noted in Table 1
3 ⁵ / ₈	No. 18 (0.0428 inch)	16" o.c.	ASTM C36 or ASTM C1396 Type X	5 ⁵ / ₈	8 along the panel edge, 12 in the field ²	ASTM C1396	1 ¹ / ₂	8 along the panel edge, 12 in the field	13	Adhesive: ADEPS Base Coat; NCB Base Finish Coat; any noted in Table 1
3 ⁵ / ₈	No. 18 (0.0428 inch)	16" o.c.	ASTM C36 or ASTM C1396 Type X	5 ⁵ / ₈	8 ³	ASTM C1396	1 ¹ / ₂	8	13	Adhesive: Genesis Base Coat; Genesis Finish Coat; any noted in Table 1
3 ⁵ / ₈	No. 20 (0.0320 inch)	16" o.c.	ASTM C36 or ASTM C1396 Type X	1 ¹ / ₂	8 ⁴	ASTM C1396	1 ¹ / ₂	8	13	Adhesive: Genesis DM Base Coat; Genesis DM Finish Coat; any noted in Table 1
Fire-retardant-treated Wood Studs ⁷										
2x4		24" o.c.	ASTM C36 or ASTM C1396 Type X	5 ⁵ / ₈	8 perimeter; 12 field ^{2a}	ASTM C1177	1 ¹ / ₂	8 perimeter; 12 field ^{3a}	4	Adhesive: Primus Basecoat; Primus Finish Coat: any noted in Table 1

For **SI**: 1 inch = 25.4 mm.

¹Fasteners are minimum No. 6, corrosion-resistant steel, self-drilling drywall screws.

²Fasteners are minimum No. 6, corrosion-resistant steel, Type S, self-drilling drywall screws.

^{2a} Fasteners are minimum No. 8, corrosion-resistant steel, Type W, bugle-head drywall screws.

³Fasteners are minimum No. 6, 1⁵/₈-inch-long, corrosion-resistant steel, Type S-12, self-drilling drywall screws.

^{3a} Fasteners are minimum No. 8, 1⁵/₈-inch-long, corrosion-resistant steel, Type W, bugle-head drywall screws.

⁴Fasteners are minimum No. 6, 1¹/₄-inch-long, corrosion-resistant steel, Type S drywall screws.

⁵Where the sheathing exceeds 1/2 inch in thickness, the screw length must be increased by the additional sheathing thickness.

⁶All joints must be taped and treated with joint compound and intermediate fastener heads are treated in accordance with ASTM C840 or GA216.

⁷Fire-retardant treated wood studs must comply with IBC Section 2303.2. Fire-retardant-treated wood framing is acceptable in Types I, II, III or IV construction as permitted by Chapter 6 of the IBC.

TABLE 5—FIRE-RESISTANCE-RATED ASSEMBLIES^{2,3}

LOAD CONDITION	FRAMING MEMBERS			SHEATHING (INTERIOR AND EXTERIOR)				MAXIMUM INSULATION BOARD THICKNESS (inches)	RATING
	METAL		MAX SPACING	TYPE ⁴	MIN. THICKNESS (inch)	MAX. FASTENER SPACING	FASTENER		
	Min. Depth	Min. Gage							
Non-load- bearing	3 ⁵ / ₈ "	25	16" o.c.	Type X FR Gypsum Board ¹	5/ ₈ "	8 inches (203 mm) on center along the perimeter and 12 inches (305 mm) on center on all intermediate studs	No. 6 by 1 ¹ / ₄ -inch-long (32 mm), self-drilling, bugle head drywall screws	4	1 hour
	3 ⁵ / ₈ "	25	16" o.c.	Two layers of Type X FR Gypsum Board ¹	5/ ₈ "	Layer 1: 16 inches (406 mm) on center at the stud locations Layer 2 (interior): 12 inches (305 mm) on center Layer 2 (exterior): 8 inches (203 mm) on center	Layer 1: No. 6 by 1 ¹ / ₄ -inch-long (32 mm), self-drilling, bugle head drywall screws Layer 2 (interior): No. 6 by 1 ⁷ / ₈ -inch-long (48 mm), self-drilling, bugle head drywall screws Layer 2 (exterior): No. 6 by 1 ⁷ / ₈ -inch-long (48 mm), self-drilling, bugle head drywall screws	4	2 hour
Load-bearing ⁵	Wood Studs								
	2x4		16" o.c.	Two layers of Type X FR Gypsum Board ¹	5/ ₈ "	Layer 1: 8 inches (203 mm) on center along perimeter; 12 inches (305 mm) on center in the field at the stud locations Layer 2 (interior): 8 inches (203 mm) on center along perimeter; 12 inches (305 mm) on center in the field at the stud locations Layer 2 (exterior): 8 inches (203 mm) on center along perimeter; 12 inches (305 mm) on center in the field at the stud locations	Layer 1: No. 8 by 2-inch-long (51 mm), Type W, bugle head drywall screws Layer 2 (interior): No. 8 by 2 ¹ / ₂ -inch-long (64 mm), Type W, bugle head drywall screws Layer 2 (exterior): No. 8 by 2 ¹ / ₂ -inch-long (64 mm), Type W, bugle head drywall screws	4	2 hour

¹All inferior board joints are taped and treated with joint compound in accordance with ASTM C840 or GA216 and intermediate fastener heads are treated with joint compound in accordance with ASTM C840 or GA216.

²EIFS Assembly: Adhesive: Any, except Genesis DM; Base Coat: Any, except Genesis DM; Finish Coat: Any.

³Rated from both sides.

⁴On exterior walls, the exterior side sheathing must be gypsum sheathing complying with ASTM C1396.

⁵Design stress reduced to 78 percent of the adjusted F'_c and have a slenderness ratio of l_e/d of 33.

ICC-ES Evaluation Report

ESR-1232 LABC and LARC Supplement

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A Subsidiary of the International Code Council®

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 24 00—Exterior Insulation and Finish Systems

REPORT HOLDER:

DRYVIT SYSTEMS, INC.

EVALUATION SUBJECT:

DRYVIT OUTSULATION® SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Dryvit Outsulation® System, described in ICC-ES evaluation report [ESR-1232](#), has also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2020 *City of Los Angeles Building Code* (LABC)
- 2020 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The Dryvit Outsulation® System, described in Sections 2.0 through 7.0 of the evaluation report [ESR-1232](#), complies with the LABC Chapters 7, 14 and 26, and the LARC Sections R316 and R703, and is subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Dryvit Outsulation® System described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-1232](#).
- The design, installation, conditions of use and identification of the Dryvit Outsulation® System are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-1232](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- The Dryvit Outsulation® System has not been evaluated under LABC Chapter 7A or LARC Section R337 for use in the exterior design and construction of new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland—Urban Interface Area.

This supplement expires concurrently with the evaluation report, reissued January 2019 and revised May 2020.

ICC-ES Evaluation Report

ESR-1232 CBC and CRC Supplement

Issued May 2020

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A Subsidiary of the International Code Council®

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 24 00—Exterior Insulation and Finish Systems

REPORT HOLDER:

DRYVIT SYSTEMS, INC.

EVALUATION SUBJECT:

DRYVIT OUTSULATION® SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Dryvit Outsulation system, described in ICC-ES evaluation report ESR-1232, has also been evaluated for compliance with the code(s) noted below.

Applicable code edition(s):

- 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)

2.0 CONCLUSIONS

2.1 CBC:

The Dryvit Outsulation system, described in Sections 2.0 through 7.0 of the evaluation report ESR-1232, complies with CBC Chapters 7, 14 and 26, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16 and 17, as applicable.

The products have not been evaluated under Chapter 7A for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

2.1.1 OSHPD:

The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Dryvit Outsulation system, described in Sections 2.0 through 7.0 of the evaluation report ESR-1232, complies with CRC Chapters 3 and 7, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report.

The products have not been evaluated under CRC Section R337 for use in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or any Wildland–Urban Interface Fire Area.

The products described in this supplement have not been evaluated for compliance with the *International Wildland–Urban Interface Code*®.

This supplement expires concurrently with the evaluation report, reissued January 2019 and revised May 2020.

ICC-ES Evaluation Report

ESR-1232 FBC Supplement

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Section: 07 24 00—Exterior Insulation and Finish Systems

REPORT HOLDER:

DRYVIT SYSTEMS, INC.

EVALUATION SUBJECT:

DRYVIT OUTSULATION® SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Dryvit Outsulation® System, recognized in ICC-ES evaluation report ESR-1232, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2017 *Florida Building Code—Building*
- 2017 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The Dryvit Outsulation® System, described in Sections 2.0 through 7.0 of the evaluation report ESR-1232, complies with the *Florida Building Code—Building* and *Florida Building Code—Residential*, provided the design and installation are in accordance with the 2015 *International Building Code*® provisions noted in the evaluation report under the following condition:

- Installation must meet the requirements of Section 1403.8 of the *Florida Building Code—Building* or Section R318.7 of the *Florida Building Code—Residential*, as applicable.

Use of the Dryvit Outsulation® System for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential* has not been evaluated and is outside the scope of this evaluation report.

For products falling under Florida Rule 9N-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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