



DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 24 00—Exterior Insulation and Finish Systems

Section: 07 24 19—Water-Drainage Exterior Insulation and Finish System

REPORT HOLDER:

PAREX USA, INC.

EVALUATION SUBJECT:

TeifsPERMADRY, TeifsWEATHERTIGHT AND TeifsPERMADRAIN WALL SYSTEMS

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)

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 inspections	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 Teifs wall systems noted in Table 1 are exterior insulation and finish systems (EIFS) complying with 2018 IBC Section 1407 (2015, 2012 and 2009 IBC Section 1408) and IRC Section R703.9. The Teifs wall systems comply as an EIFS with drainage in accordance with 2018 IBC Section 1407.4.1 (2015, 2012 and 2009 IBC Section

1408.4.1) and IRC Section R703.9. The systems may be used in fire-resistance-rated construction and any construction type (IBC Types I through V) when installed in accordance with this report.

3.0 DESCRIPTION

3.1 System Components:

See Table 1. The Teifs systems consist of a water-resistive barrier coating, drainage medium, expanded polystyrene (EPS) insulation board, adhesive, base coat, reinforcing mesh fabric and finish.

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. The board must be labeled in accordance with the applicable report.
- b. EPS insulation board complying with ASTM C578, Type I, and ASTM E2430, produced by a molder participating in an approved third-party quality assurance program. The board is labeled in accordance with the applicable code.

EPS insulation boards must 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.

3.3 Substrates:

Substrates must be one of the following:

- Gypsum sheathing board 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 with 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 with 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
- 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:

Teifs wall systems must be installed in accordance with 2018 IBC Section 1407 (2015, 2012 and 2009 IBC Section 1408), IRC Section R703.9 and the manufacturer's application instructions, specifications and installation details. These are available at:

<http://www.teifs.com/literature/EIFSAPG.pdf>.

4.2 Drainage:

Drainage mediums, as noted in Table 1, are:

- Teifs Weathertight: channeled insulation board
- Teifs Weathertight VNT: vertical ribbons of adhesive with flat insulation board
- Teifs PermaDry: Grade D building paper with channeled insulation board
- Teifs PermaDrain: Tyvek StuccoWrap with flat insulation board
- Teifs PermaDrain DM: drainage mat with flat insulation board
- Teifs PermaDrain ML: metal lath with flat insulation board

4.3 Wind Design:

Table 2 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 of a registered design professional.

4.4 Weather Protection:

The Teifs wall systems comply with 2018 IBC Section 1402.2 (2015, 2012 and 2009 IBC Section 1403.2) and IRC Section R703.1.1.

4.5 Use in Types I through IV Construction:

Table 3 describes the assemblies using Teifs Weathertight that are qualified for use in Types I through IV construction.

4.6 Fire-resistance-rated Construction Assemblies:

Table 4 describes the assemblies using Teifs PermaDry that are qualified for use in nonload-bearing fire-resistance-rated construction. In Type V construction, the Teifs wall systems may be attached to the surface of combustible exterior fire-resistance-rated assemblies described in 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 Inspections:

For recognition under the IBC, special inspection of the water-resistive coating must be conducted in accordance with 2018 and 2015 IBC Section 1705.16 (2012 IBC Section 1705.15 (2009 IBC Section 1704.14.1)). Refer to Parex USA, Inc., Third Party Inspection Guidelines for verifying field preparation of materials.

5.0 CONDITIONS OF USE

The TeifsPERMADRY, TeifsWEATHERTIGHT and TeifsPERMADRAIN wall systems 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 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's instructions and this report, this report governs.
- 5.2 The insulation board must be separated from the building interior by a thermal barrier complying with the applicable code.
- 5.3 Installation must be by applicators acceptable to Parex USA, Inc.
- 5.4 Termination of the system must not be less than 6 inches (152 mm) above finished grade, in accordance with 2018, 2015 and 2009 IBC Section 2603.8 (2012 IBC Section 2603.9) and IRC Section R318.4.
- 5.5 Adequacy of fasteners for concrete, masonry, brick or portland cement plaster substrates must be demonstrated to the satisfaction of the code official by a proof-load test program consisting of fastener withdrawal from the wall. The average withdrawal strength, in pounds, must be six times the required fastener load.

6.0 EVIDENCE SUBMITTED

- 6.1 Reports of tests in accordance with ASTM E2568 and ASTM E2273.
- 6.2 Data in accordance with the ICC-ES Acceptance Criteria for EIFS Clad Drainage Wall Assemblies (AC235), dated January 2015 (editorially revised April 2018).
- 6.3 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Coatings Used as Water-resistive Barriers over Exterior Sheathing (AC212), dated February 2015 (editorially revised April 2018).

7.0 IDENTIFICATION

- 7.1 Each container or package of the coating or reinforcing mesh used as part of the Teifs wall systems must be labeled with the Parex USA, 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-1935).

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

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

PAREX USA, INC.
2150 EASTRIDGE AVENUE
RIVERSIDE, CALIFORNIA 92507
(714) 333-3269
www.parexusa.com

TABLE 1—COATING SYSTEM COMPONENTS¹

SYSTEM	WATER-RESISTIVE BARRIER	DRAINAGE MEDIUM	ADHESIVE BASE COATS	REINFORCING MESH	FINISH
TeifsWeathertight	Parex USA WeatherSeal (ESR-2045)	Grooved EPS Insulation Board	TeifsBase, TeifsBase D.B.	Standard Reinforcing Mesh, Nominally 4.3 oz/yd ² minimum ³	TeifsFLEX DPR Acrylic Finish 300 Series, DPR Acrylic Finish 500 Series, or DPR Optimum Finish
TeifsWeathertight VNT	Parex USA WeatherSeal (ESR-2045)	VNT adhesive			
TeifsPermaDry	Grade D Building paper ²	Grooved EPS Insulation Board			
TeifsPermaDrain	Tyvek StuccoWrap (ESR-2375)	Tyvek StuccoWrap			
TeifsPermaDrain DM	Grade D Building paper ²	Drainage Mat			
TeifsPermaDrain ML	Grade D Building paper ²	Metal lath			

¹Refer to Section 3.2 for insulation boards.

²Building paper must be Grade D having a 60-minute water-resistance rating.

³Higher weight meshes are allowable.

TABLE 2—WIND LOAD DESIGN

FRAMING MEMBERS ³		SUBSTRATE			INSULATION			
Type, Min Depth (inches)	Max. Spacing (inches o.c.)	Type	Fastener Type	Max. Fastener Spacing (inches o.c.)	Thickness (Min.)	Attachment	Allowable Wind Load (psf) ²	
							Negative	Positive
TeifsWEATHERTIGHT								
2x4 Wood ¹	16	Any sheathing noted in Section 3.3	No. 6 self-drilling bugle head screws, 1 1/4" long	6" o.c.	3/4	2-inch-diameter Wind Devil™ plastic washer with No. 8, Type W buglehead screw spaced 6" o.c. along the panel edge and 12" o.c. field; must penetrate 1 1/2 inches into wood framing or through steel framing	24	28
3 5/8-by-No-18-gage-steel	16	Any sheathing noted in Section 3.3	No. 6 self-drilling bugle head screws, 1 1/4" long	6" o.c.	3/4	2-inch-diameter Wind Devil™ plastic washer with No. 8, Type W buglehead screw spaced 6" o.c. along the panel edge and 12" o.c. field; must penetrate 1 1/2 inches into wood framing or through steel framing	21	28
TeifsPERMADRY								
2x4 Wood ¹	16	Any sheathing noted in Section 3.3	No. 6 self-drilling bugle head screws, 1 1/4" long	6" o.c.	1 1/2	2-inch-diameter Wind Devil™ plastic washer with No. 8, Type W buglehead screw spaced 6" o.c. along the panel edge and 12" o.c. field; must penetrate 1 1/2 inches into wood framing or through steel framing	29	57
2x4 Wood ¹	16	Min. 7/16-inch Wood Structural Panel	6d nails by 1 1/4 long	8" o.c. field, 6" o.c. panel edge	1 1/4	2-inch-diameter Wind Devil™ plastic washer with No. 8, Type W buglehead screw spaced 6" o.c.; must penetrate 1/2 inch through sheathing	31	57
3 5/8-by-No-18-gage-steel	16	Any sheathing noted in Section 3.3	No. 6 self-drilling bugle head screws, 1 1/4" long	6" o.c.	1 1/4	2-inch-diameter Wind Devil™ plastic washer with No. 8, Type S buglehead screw spaced 6" o.c.; must penetrate through steel framing	27	34
3 5/8-by-No-20-gage-steel	16	Min. 7/16-inch Wood Structural Panel	No. 6 self-drilling bugle head screws, 1 1/4" long	6" o.c.	1 1/4	2-inch-diameter Wind Devil™ plastic washer with No. 8, Type W buglehead screw spaced 6" o.c.; must penetrate 1/2-inch through sheathing	20	35
N/A	N/A	Concrete/ Unglazed Brick/ Cement Plaster/ Concrete Masonry	--	--	1 1/4	--	57	--

TABLE 2—WIND LOAD DESIGN (Continued)

FRAMING MEMBERS ³		SUBSTRATE			INSULATION			
Type, Min Depth (inches)	Max. Spacing (inches o.c.)	Type	Fastener Type	Max. Fastener Spacing (inches o.c.)	Thickness (Min.)	Attachment	Allowable Wind Load (psf) ²	
							Negative	Positive
TeifsPERMADRAIN								
N/A	N/A	Concrete/ Unglazed Brick/ Cement Plaster/ Concrete Masonry	--	--	³ / ₄	--	27	34
TeifsPERMADRAIN / TeifsPERMADRAIN DM								
2x4 Wood ¹	16	Any sheathing noted in Section 3.3	No. 6 self-drilling bugle head screws, 1 ¹ / ₄ " long	6" o.c.	1 ¹ / ₄	2-inch-diameter Wind Devil™ plastic washer with No. 8, Type W buglehead screw spaced 6" o.c. along the panel edge and 12" o.c. field; must penetrate 1 ¹ / ₂ inches into wood framing or through steel framing	31	57
2x4 Wood ¹	16	Min. ⁷ / ₁₆ -inch Wood Structural Panel	6d nails by 1 ¹ / ₄ long	8" o.c. field, 6" o.c. panel edge	1 ¹ / ₄	2-inch-diameter Wind Devil™ plastic washer with No. 8, Type W buglehead screw spaced 6" o.c.; must penetrate ¹ / ₂ -inch through sheathing	31	57
3 ⁵ / ₈ -by-No-18-gage-steel	16	Any sheathing noted in Section 3.3	No. 6 self-drilling bugle head screws, 1 ¹ / ₄ " long	6" o.c.	³ / ₄	2-inch-diameter Wind Devil™ plastic washer with No. 12, Type S buglehead screw spaced 6" o.c.; must penetrate through steel framing	27	34
3 ⁵ / ₈ -by-No-20-gage-steel	16	Any sheathing noted in Section 3.3	No. 6 self-drilling bugle head screws, 1 ¹ / ₄ " long	6" o.c.	³ / ₄	2-inch-diameter Wind Devil™ plastic washer with No. 12, Type S buglehead screw spaced 6" o.c.; must penetrate through steel framing	20	35
TeifsPERMADRAIN ML								
3 ⁵ / ₈ -by-No-20-gage-steel	16	Any sheathing noted in Section 3.3	No. 6 self-drilling bugle head screws, 1 ¹ / ₄ " long	6" o.c.	³ / ₄	2-inch-diameter Wind Devil™ plastic washer with No. 12, Type S buglehead screw spaced 6" o.c.; must penetrate through steel framing	31	38

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

¹Minimum nominal 2x4 wood framing, minimum specific gravity 0.42.

²Maximum positive pressure is limited to the capacity of the framing and structural sheathing, concrete, brick, concrete masonry or Portland cement plaster substrate, determined in accordance with the applicable code or the values stated in the table, whichever is less.

³Framing 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 3—ASSEMBLIES FOR USE WITH TYPES I THROUGH IV CONSTRUCTION^{1,2,3}

FRAMING MEMBERS			INTERIOR SHEATHING			EXTERIOR SHEATHING			INSULATION BOARD
Min. Depth (inch)	Min Gage	Max. spacing (inches o.c.)	Type and Min. Thickness (inch)	Fastener Type	Max. Spacing (inches o.c.)	Type and Min. Thickness (inch)	Fastener Type	Max. Spacing (inches o.c.)	Thickness Maximum (inch)
3 ⁵ / ₈ -inch steel	18	16" o.c.	Min. 1/2" Type X gypsum wallboard complying with ASTM C36 or ASTM C1396	No. 6, 1 1/4-inch-long, bugle head drywall screws	8" o.c. along panel edges and 12" o.c. in the field	Min. 1/2" water-resistant core, gypsum board complying with ASTM C1396 or ASTM C79	No. 12, 1 1/4-inch-long, Type S drywall screws	6" o.c.	4

SI: 1 inch = 25.4 mm.

¹Coating system is described in Table 1.

²Tefis Weathertight and Weathertight VNT are permitted in Types I through IV construction.

³Floor levels must be blocked with mineral wool insulation, 4-inch-thick (102 mm) and 4 pcf (64.1 kg/m³).

TABLE 4—FIRE-RESISTANCE-RATED ASSEMBLIES^{1,2,3}

FRAMING MEMBERS		INTERIOR SHEATHING			EXTERIOR SHEATHING			INSULATION BOARD
Type	Max. spacing (inches o.c.)	Type and Min. Thickness (inch)	Fastener Type	Max. Spacing (inches o.c.)	Type and Min. Thickness (inch)	Fastener Type	Max. Spacing (inches o.c.)	Thickness Maximum (inch)
2x4 wood	16" o.c.	Min. 5/8" Type X gypsum wallboard complying with ASTM C36 or ASTM C1396	1 3/4-inch-long, with 7/16-inch diameter head galvanized nails having 0.128-inch-diameter shank	8" o.c.	Min. 5/8" water-resistant core, gypsum board complying with ASTM C1396 or ASTM C79	1 3/4-inch-long, with 7/16-inch diameter head galvanized nails having 0.128-inch-diameter shank	8" o.c.	4

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

¹Coating system is described in Table 1.

²Tefis PermaDry is permitted in Fire-resistance-rated assemblies.

³Rated from both sides.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 24 00—Exterior Insulation and Finish Systems

Section: 07 24 19—Water-Drainage Exterior Insulation and Finish System

REPORT HOLDER:

PAREX USA, INC.

EVALUATION SUBJECT:

TeifsPERMADRY, TeifsWEATHERTIGHT AND TeifsPERMADRAIN WALL SYSTEMS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Teifs wall systems, described in ICC-ES evaluation report ESR-1935, have also been evaluated for compliance with the codes 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 Teifs wall systems, described in Sections 2.0 through 7.0 of the evaluation report ESR-1935, comply 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 7, 14, 16, 17 and 26, 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 Teifs wall systems, described in Sections 2.0 through 7.0 of the evaluation report ESR-1935, comply 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.

This supplement expires concurrently with the evaluation report, reissued March 2021.