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ICC-ES Evaluation Report

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DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07 24 00—Exterior Insulation and Finish Systems

REPORT HOLDER:

PAREX USA, INC.
4125 EAST LA PALMA AVENUE, SUITE 250
ANAHEIM, CALIFORNIA 92807
(800) 537-2739
technicalservice@parexusa.com
www.teifs.com

EVALUATION SUBJECT:

TEIFSFLEX AND TEIFSAIRTIGHT SYSTEMS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 *International Building Code* (IBC)
- 2009 *International Residential Code* (IRC)

Properties evaluated:

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

2.0 USES

The TeifsFlex and TeifsAirtight Systems are exterior insulation and finish systems (EIFS) complying with IBC Section 1408 and IRC Section R703.9. The systems may be used fire-resistance-rated construction and any construction type (IBC Types I through V), with the exception of framed walls in a Group R1, R2, R3 or R4 Occupancy Group. Under the IRC the systems are limited to use on concrete or masonry walls.

3.0 DESCRIPTION

3.1 System Components:

See Table 1.

3.2 Insulation Board:

Insulation board must comply with either Section 3.2.1 or 3.2.2. Also, the foam 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 E 84, at a maximum thickness of 4 inches (101 mm).

EPS insulation board must comply with ASTM C 578, Type I, and ASTM E 2430, and must be produced by a molder with a current evaluation report.

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 C 578, Type I, and ASTM E 2430, and be labeled in accordance with the code.

3.3 Substrates:

- Gypsum sheathing complying with ASTM C 1396 or ASTM C 1177
- Fiber cement panels complying with the ICC-ES Acceptance Criteria for Fiber Cement Siding Used as Exterior Wall Siding (AC90), and ASTM C 1186
- 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 C 1325
- 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 C 920, Type S or M, minimum Grade NS, minimum Class 25 and Use O.

4.0 DESIGN AND INSTALLATION

4.1 General:

The TeifsFlex and TeifsAirtight Systems must be installed in accordance with the manufacturer's installation instructions, specifications and details available at www.teifs.com in the Systems and Products section under the 07240 EIFS subsection.

4.2 Drainage Options:

The TeifsFlex and TeifsAirtight Systems have not been qualified as an EIFS with drainage, as described in IBC Section 1408.4.1 and IRC Section R703.9.2.

4.3 Wind Design (see Table 2):

Table 2 lists 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 qualified design professional.

4.4 Weather Protection:

The TeifsFlex and TeifsAirtight Systems comply with IBC Section 1403.2 and IRC Section R703.1.1.

4.5 Use in Types I through IV Construction:

Table 3 lists the assemblies qualified for use in Types I through IV construction.

4.6 Fire-resistance-rated Construction:

Table 4 lists the assemblies qualified for use in nonload-bearing fire-resistance-rated construction. In addition, in Type V construction, the TeifsFlex and TeifsAirtight Systems may be attached to the surface of combustible exterior fire-resistance-rated assemblies described in 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 Inspections must be conducted in accordance with Section 1704.14 of the code. Refer to the Parex USA, Inc., Third Party Inspection Guidelines for verifying field preparation of materials.

5.0 CONDITIONS OF USE

The TeifsFlex and TeifsAirtight 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 listed by Parex USA, Inc.

5.4 Termination of the systems must not be less than 6 inches (152 mm) above finished grade in accordance with IBC Section 2603.8 and IRC Section R320.5.

6.0 EVIDENCE SUBMITTED

6.1 Reports of tests in accordance with ASTM E 2568.

6.2 Data in accordance with the ICC-ES Acceptance Criteria for Exterior Insulation and Finish Systems (AC219), dated October 2009.

6.3 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated June 2009.

7.0 IDENTIFICATION

Each container or package of the coating or reinforcing mesh used as part of the TeifsFlex and TeifsAirtight 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 2861). 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 3.2.2.

TABLE 1—SYSTEM COMPONENTS

System	Water-Resistive Barrier	Adhesive (Attachment)*	Base Coats	Reinforcing Mesh (oz/yd^2)	Finish
TeifsFlex	(Optional) WeatherSeal Trowel-On WeatherSeal Spray & Roll-On	Teifs Base TeifsAdheeze Mechanical Fastener	TeifsBase TeifsBase DB	Standard 4.8 oz/yd^2 Standard Extra 6.0 oz/yd^2 Intermediate 12.0 oz/yd^2 Heavy 15.0 oz/yd^2 Heavy Plus 20.0 oz/yd^2	TeifsFlex Finish TeifsDPR Finish
TeifsAirtight	WeatherSeal Trowel-On WeatherSeal Spray & Roll-On				

For **SI:** 1 oz/yd^2 = 33.9 g/m^2.

TABLE 1a—SUBSTRATES

Adhesive*	Substrates
TeifsBase	TeifsWeatherseal or Weatherseal Roll-On All substrates except Plywood and OSB
TeifsAdheeze	Plywood and OSB TeifsWeatherseal or Weatherseal Roll-On ASTM C 1396 Sheathing ASTM C1177 Sheathing

TABLE 2—WIND LOAD DESIGN (ADHESIVELY ATTACHED WITH OPTIONAL WRB)

Framing Members				Sheathing			Wind Load Capacity (allowable)	Min. EPS Thickness (inches)
Wood[1]	Metal		Maximum Spacing (inches o.c.)	Type	Min. Thickness (inch)	Maximum Fastener Spacing (inches o.c)	Neg.	
	Min. Depth (inches)	Min. Gage						
	$3^5/_8$	20	24	ASTM C 1396	$^5/_8$	8	108	2
	$3^5/_8$	20	16	ASTM C 1396	$^1/_2$	6	93	$^3/_4$
	$3^5/_8$	20	24	ASTM C 1396	$^5/_8$	6	66	$^3/_4$
X			16	Wood Structural panel	$^7/_{16}$	* [1]	87	$1^1/_2$
X			16	ASTM C 1396	$^1/_2$	6	111	$^3/_4$
X			16	ASTM C 1396	$^5/_8$	6	108	$^3/_4$
X			24	ASTM C 1396	$^1/_2$	6	72	$^3/_4$
X			24	ASTM C 1396	$^5/_8$	6	78	$^3/_4$

For **SI:** 1 inch = 25.5 mm.

[1]Minimum 2 x 4 and Specific Gravity of 0.42.
[2]Framing must be designed to resist the applied forces and be limited to a deflection of L/240.

TABLE 2a—WIND LOAD DESIGN (MECHANICALLY FASTENED SYSTEM W/ OPTIONAL BUILDING PAPER)

Framing Members				Sheathing			Wind Load Capacity (allowable)	Min. EPS Thickness (inches)
Wood	Metal		Maximum Spacing (inches)	Type	Min. Thickness (inch)	Maximum Fastener Spacing (inches o.c)	Neg.	
	Min. Depth (inches)	Min. Gage						
X[1]			16 o.c.	Wood Structural panel	$^7/_{16}$	* [1]	87	$1^1/_2$
	$3^5/_8$	20	16 o.c.	ASTM C 1396	$^1/_2$	6	60	$^3/_4$
	$3^5/_8$	18	16 o.c.	ASTM C 1396	$^1/_2$	6	78	$^3/_4$

For **SI:** 1 inch = 25.5 mm.

[1]The insulation board is attached to the wood-based sheathing with a minimum of eight fasteners for insulation boards greater than 2 by 2 feet, but not exceeding 2 by 4 feet. A minimum of five fasteners must be used for insulation boards not exceeding 2 feet by 2 feet.
[2]Framing must be designed to resist the applied forces and be limited to a deflection of L/240.

Note: Maximum positive wind pressure for the TeifsFLEX system applied to concrete masonry, brick or concrete is governed by the structural capacity of the substrate
For Teifs systems applied to concrete masonry, brick or concrete, the maximum allowable negative wind pressure is 57 psf (2.7 kN/m^2).

TABLE 3—ASSEMBLIES FOR USE IN TYPES I THROUGH IV CONSTRUCTION

Framing Members			Interior Sheathing			Exterior Sheathing			Insulation Board Thickness Maximum (inches)	Assembly
Metal		Max. Spacing (inches)	Type	Min. Thickness (inch)	Max. Fastener Spacing (inches)	Type	Min. Thickness (inch)	Max. Fastener Spacing[1] (inches)		
Min. Depth	Min. Gage									
$3^5/_8$"	18	24 o.c.	ASTM C36 or ASTM C 1396 Type X	$^5/_8$"	8 o.c.	ASTM C 1396	$^5/_8$	8" o.c. along all studs	4	Water-resistive Barrier Coating (Optional): WeatherSeal Trowel-On WeatherSeal Spray & Roll-On Adhesive: TeifsBase Base Coat: TeifsBase Finish Coat: Any
$3^5/_8$"	18	16 o.c.	ASTM C36 or ASTM C 1396 Type X	$^5/_8$"	8 o.c.	ASTM C 1396	$^1/_2$	6" o.c. along all studs	4	

For **SI:** 1 inch = 25.5 mm.

[1]S-12 steel screws.

TABLE 4—ONE-HOUR FIRE-RESISTANCE-RATED ASSEMBLIES

Framing Members			Sheathing (Interior and Exterior)[1]				Insulation Board Thickness Maximum (inches)	Assembly
Metal		Max. Spacing (inches)	Type	Min. Thickness (inch)	Max. Fastener Spacing	Fastener		
Min. Depth	Min. Gage							
$3^5/_8$"	25	24 o.c.	ASTM C 1396 Type X	$^5/_8$	8 inches on center along the vertical edges of the wallboard and 12 inches on center to the top track, bottom track and intermediate studs	No. 6 by 1-inch-long buglehead drywall screws	4	Water-resistive Barrier Coating(Optional): WeatherSeal Trowel-On WeatherSeal Spray & Roll-On Adhesive: TeifsBase Base Coat: TeifsBase Finish Coat: Any

For **SI:** 1 inch = 25.5 mm.

[1]All joints are taped and treated with joint compound. Intermediate fastener heads are treated with joint compound in accordance with ASTM C 840 or GA216.