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
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

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1.0 EVALUATION SCOPE

Compliance with the following codes:

Properties evaluated:

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

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-resistant 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.
4125 EAST LA PALMA AVENUE, SUITE 250
ANAHEIM, CALIFORNIA 92807
(714) 333-3269
www.parexusa.com
### TABLE 1—COATING SYSTEM COMPONENTS

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>WATER-RESISTIVE BARRIER</th>
<th>DRAINAGE MEDIUM</th>
<th>ADHESIVE BASE COATS</th>
<th>REINFORCING MESH</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>TeifsWeatherlight</td>
<td>Parex USA WeatherSeal (ESR-2045)</td>
<td>Grooved EPS Insulation Board</td>
<td></td>
<td></td>
<td>TeifsBase, TeifsBase D.B.</td>
</tr>
<tr>
<td>TeifsWeatherlight VNT</td>
<td>Parex USA WeatherSeal (ESR-2045)</td>
<td>VNT adhesive</td>
<td></td>
<td></td>
<td>TeifsFLEX DPR Acrylic Finish 300 Series, DPR Acrylic Finish 500 Series, or DPR Optimum Finish</td>
</tr>
<tr>
<td>TeifsPermaDry</td>
<td>Grade D Building paper</td>
<td>Grooved EPS Insulation Board</td>
<td></td>
<td>Standard Reinforcing Mesh, Nominally 4.3 oz/yd² minimum³</td>
<td></td>
</tr>
<tr>
<td>TeifsPermaDrain</td>
<td>Tyvek StuccoWrap (ESR-2375)</td>
<td>Tyvek StuccoWrap</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TeifsPermaDrain DM</td>
<td>Grade D Building paper²</td>
<td>Drainage Mat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TeifsPermaDrain ML</td>
<td>Grade D Building paper²</td>
<td>Metal lath</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>FRAMING MEMBERS³</th>
<th>SUBSTRATE</th>
<th>INSULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type, Min Depth (inches)</td>
<td>Max. Spacing (inches o.c.)</td>
<td>Type</td>
</tr>
<tr>
<td>2x4 Wood¹</td>
<td>16</td>
<td>Any sheathing noted in Section 3.3</td>
</tr>
<tr>
<td>3⅞-by-No-18-gage-steel</td>
<td>16</td>
<td>Any sheathing noted in Section 3.3</td>
</tr>
<tr>
<td>TeifsPERMADRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2x4 Wood¹</td>
<td>16</td>
<td>Any sheathing noted in Section 3.3</td>
</tr>
<tr>
<td>2x4 Wood¹</td>
<td>16</td>
<td>Min. ¾-inch Wood Structural Panel</td>
</tr>
<tr>
<td>3⅞-by-No-18-gage-steel</td>
<td>16</td>
<td>Any sheathing noted in Section 3.3</td>
</tr>
<tr>
<td>3⅞-by-No-20-gage-steel</td>
<td>16</td>
<td>Min. ¾-inch Wood Structural Panel</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Concrete/ Unglazed Brick/ Cement Plaster/ Concrete Masonry</td>
</tr>
</tbody>
</table>

²Refer to Section 3.3 for insulation boards.
³Building paper must be Grade D having a 60-minute water-resistance rating.
⁴Higher weight meshes are allowable.
TABLE 2—WIND LOAD DESIGN (Continued)

<table>
<thead>
<tr>
<th>FRAMING MEMBERS3</th>
<th>SUBSTRATE</th>
<th>INSULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type, Min Depth (inches)</td>
<td>Max. Spacing (inches o.c.)</td>
<td>Type Fastener Type</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>Concrete/ Unglazed Brick/ Cement Plaster/ Concrete Masonry</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Teif PERMADRAIN

N/A N/A Concrete/ Unglazed Brick/ Cement Plaster/ Concrete Masonry -- -- 3/4 -- 27 34

TeifsPERMADRAIN / TeifsPERMADRAIN DM

2x4 Wood1 16 Any sheathing noted in Section 3.3 No. 6 self-drilling bugle head screws, 1/4" long 6" o.c. 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 1/2 inches into wood framing or through steel framing 31 57

2x4 Wood1 16 Min. 7/8-inch Wood Structural Panel 6d nails by 1/4 long 8" o.c. field, 6" o.c. panel edge 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

35/8-by-No-18-gage-steel 16 Any sheathing noted in Section 3.3 No. 6 self-drilling bugle head screws, 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

35/8-by-No-20-gage-steel 16 Any sheathing noted in Section 3.3 No. 6 self-drilling bugle head screws, 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

35/8-by-No-20-gage-steel 16 Any sheathing noted in Section 3.3 No. 6 self-drilling bugle head screws, 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 CONSTRUCTION¹,²,³

<table>
<thead>
<tr>
<th>FRAMING MEMBERS</th>
<th>INTERIOR SHEATHING</th>
<th>EXTERIOR SHEATHING</th>
<th>INSULATION BOARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. Depth (inch)</td>
<td>Min Gage</td>
<td>Max. spacing (inches o.c.)</td>
<td>Type and Min. Thickness (inch)</td>
</tr>
<tr>
<td>35/8-inch steel</td>
<td>18</td>
<td>16&quot; o.c.</td>
<td>Min. 1/2&quot; Type X gypsum wallboard complying with ASTM C36 or ASTM C1396</td>
</tr>
</tbody>
</table>

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 ASSEMBLIES¹,²,³

<table>
<thead>
<tr>
<th>FRAMING MEMBERS</th>
<th>INTERIOR SHEATHING</th>
<th>EXTERIOR SHEATHING</th>
<th>INSULATION BOARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Max. spacing (inches o.c.)</td>
<td>Type and Min. Thickness (inch)</td>
<td>Fastener Type</td>
</tr>
<tr>
<td>2x4 wood</td>
<td>16&quot; o.c.</td>
<td>Min. 5/8&quot; Type X gypsum wallboard complying with ASTM C36 or ASTM C1396</td>
<td>11/2-inch-long, with 3/16-inch diameter head galvanized nails having 0.128-inch-diameter shank</td>
</tr>
</tbody>
</table>

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.