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:

DRYVIT SYSTEMS, INC.

ONE ENERGY WAY
WARSWICK, RHODE ISLAND 02893

EVALUATION SUBJECT:

DRYVIT OUTSULATION® X SYSTEM
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 Systems

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

EVALUATION SUBJECT:  
DRYVIT OUTSULATION® X SYSTEM

1.0 EVALUATION SCOPE  
Compliance with the following codes:  
- 2012 and 2009 International Building Code® (IBC)  
- 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.

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>Fire-resistance-rated construction</td>
<td>7</td>
<td>R3</td>
</tr>
<tr>
<td>Weather resistance</td>
<td>14</td>
<td>R7</td>
</tr>
<tr>
<td>Special inspections</td>
<td>17</td>
<td>NA</td>
</tr>
<tr>
<td>Structural – transverse wind load resistance</td>
<td>16</td>
<td>R6</td>
</tr>
<tr>
<td>Type I-IV (noncombustible) construction</td>
<td>26</td>
<td>NA</td>
</tr>
<tr>
<td>Surface-burning characteristics</td>
<td>26</td>
<td>R3</td>
</tr>
<tr>
<td>Ignition resistance</td>
<td>26</td>
<td>NA</td>
</tr>
</tbody>
</table>

2.0 USES  
The Dryvit Outsulation X System is an adhesively and mechanically attached exterior insulation and finish system (EIFS) complying with IBC Section 1408 and IRC Section R703.9. The system complies as an EIFS with drainage in accordance with IBC Section 1408.4.1 and IRC Section R703.9.

The system may be used in fire-resistance-rated Type V construction when installed in accordance with Section 4.6 of this report, and in Types I, II, III and IV construction when installed in accordance with Section 4.5 of this report.

3.0 DESCRIPTION  
3.1 System Components:  
See Table 1. The system consists of a water-resistive barrier coating, adhesive, Dow Xnergy™ extruded polystyrene insulation board, mechanical fasteners, basecoat, reinforcing mesh and finish.

3.2 Insulation Board:  
The insulation board must be Dow Xnergy extruded polystyrene (XPS) foam plastic complying with ASTM C578, Type X, as recognized in ICC-ES evaluation report ESR-2142.

3.3 Substrates:  
The substrate must be one of the following:  
- Minimum 1/2-inch-thick (12.7 mm) gypsum sheathing board complying with ASTM C1396 or ASTM C1177. When used as part of a fire-resistive-rated assembly, the gypsum sheathing must be Type X with a minimum thickness of 5/8 inch (15.9 mm).  
- Brick or concrete masonry complying with the IBC or IRC.  
- Concrete complying with the IBC or IRC.  
- Exterior cement plaster complying with the IBC or IRC.  
- Exposure 1 wood structural panels complying with DOC PS-1 or PS-2.

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

4.0 INSTALLATION  
4.1 General:  
The Dryvit Outsulation X System must be installed in accordance with IBC Section 1408, IRC Section R703.9 and the manufacturer’s specifications, application instructions and details. These are available at:  

4.2 Drainage:  
Drainage must be provided between the flat Dow Xnergy insulation board and the water-resistive barrier coating by notched-trowel application of the Genesis adhesive mixture in a vertical orientation on the back side of the flat
insulation board, with a trowel having \( \frac{3}{16} \)-inch-wide-by-\( \frac{1}{2} \)-inch-deep (9.5 mm by 12.7 mm) notches spaced \( \frac{1}{2} \) inches (38 mm) on center.

4.3 Wind Design:
Table 2 describes specific assemblies for which test data has been submitted. Other assemblies may be considered for approval by the code official based on testing and/or on calculations prepared by a qualified design professional.

4.4 Weather Protection:
The Dryvit Outsulation X system complies with IBC Section 1403.2 and IRC Section R703.1.1.

4.5 Types I, II, III and IV Construction:
Table 3 describes assemblies using the Dryvit Outsulation X system that are qualified for use in Types I through IV construction.

4.6 Fire-resistance-rated Construction Assemblies:
In Type V construction, the Dryvit Outsulation X system 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 Mechanical Fasteners:
To qualify the adequacy of fasteners in concrete or masonry substrates, a tension-load test program, consisting of fastener withdrawal from the applicable wall(s) of the building(s) at the location in question, must be implemented. The testing must be conducted by an approved testing laboratory. The average withdrawal strength, in pounds, must be six times the design wind pressure for the location in question. A minimum of five tests per program is required, with results varying by no more than 15 percent from the average. If a minimum of 10 tests per program is conducted, variation from the average may be disregarded. For masonry substrates, a minimum of 40 percent of the tests must be run in masonry joints. Prior to installation of EIFS fasteners, a certificate of compliance, concerning test results relating to load requirements in the evaluation report, must be submitted to and approved by the code official.

4.8 Special Inspection:
For recognition under the IBC, special inspection of the Dryvit Backstop NT Texture or Dryvit Backstop NT Smooth water-resistive barrier coating must be conducted in accordance with 2012 IBC Section 1705.15.1 or 2009 IBC Section 1704.14.1. The Dryvit Third Party Inspection Guidelines for Owners and General Contractors/Construction Managers are available at:


5.0 CONDITIONS OF USE
The Dryvit Outsulation X 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 manufacturer’s instructions and this report, the more restrictive governs.

5.2 The Dow Xnergy 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 Dryvit Systems, Inc.

5.4 Termination of the system must not be less than 6 inches (152 mm) above finished grade, in accordance with 2012 IBC Section 2603.9 or 2009 IBC Section 2603.8, and IRC Section R318.4.

6.0 EVIDENCE SUBMITTED
6.1 Reports of tests in accordance with ASTM E2568 and ASTM E2570.

6.2 Data in accordance with the ICC-ES Acceptance Criteria for EIFS Clad Drainage Wall Assemblies (AC235), dated October 2009 (editorially revised January 2012).

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 June 2011.

7.0 IDENTIFICATION
Each container or package of coating or reinforcing mesh used as part of the Dryvit Outsulation X system must be labeled with the name and address of Dryvit Systems, Inc.; product name; lot or batch number; quantity of material; storage instructions; pot life; expiration date; and the evaluation report number (ESR-3295).

Dow Xnergy insulation boards must be labeled with the manufacturer’s name; manufacturing address or plant identification; the name of the inspection agency (ICC-ES); and the applicable ICC-ES evaluation report number (ESR-2142).
### TABLE 1—SYSTEM COMPONENTS

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>WATER-RESISTIVE BARRIER</th>
<th>INSULATION BOARD</th>
<th>BASE COAT</th>
<th>REINFORCING MESH</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dryvit Outsulation X System</td>
<td>Dryvit Backstop NT Texture or Dryvit NT Smooth</td>
<td>Dow Xnergy Section 3.2</td>
<td>Genesis</td>
<td>Standard Plus Reinforcing Mesh, nominally 6.0 oz/yd²</td>
<td></td>
</tr>
</tbody>
</table>

| | | | | | DPR PMR |

| Dryvit Grid Tape |

### TABLE 2—WIND LOAD DESIGN

<table>
<thead>
<tr>
<th>FRAMING MEMBERS</th>
<th>SUBSTRATE</th>
<th>MECHANICAL FASTENERS</th>
<th>MIN. DOW XNERGY THICKNESS (inch)</th>
<th>WIND LOAD CAPACITY (ALLOWABLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Spacing (inches)</td>
<td>Max. Fastener Spacing (inches o.c.)</td>
<td>Fastener Type</td>
<td>Thickness</td>
</tr>
<tr>
<td>2x4 wood¹</td>
<td>16&quot; o.c.</td>
<td>See Section 3.3, min. 1/2&quot; thick</td>
<td>6&quot; o.c.</td>
<td>No. 6 self-drilling screws, 1 1/2&quot; long</td>
</tr>
<tr>
<td>3 5/8-inch by No. 18 gage steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete/ unglazed brick/ cement plaster/ concrete masonry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>NA</td>
<td>NA</td>
<td>1</td>
</tr>
</tbody>
</table>

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

¹Minimum nominally 2x4 wood framing, minimum specific gravity 0.43.
²Maximum positive pressure is limited to the capacity of the framing and structural sheathing, or concrete, brick, concrete masonry or Portland cement plaster substrate, determined in accordance with the applicable code.
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 TYPE I, II, III AND IV CONSTRUCTION

<table>
<thead>
<tr>
<th>FRAMING MEMBERS</th>
<th>INTERIOR SHEATHING</th>
<th>EXTERIOR SHEATHING</th>
<th>MAX. DOW XNERGY THICKNESS (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Depth and Min. Thickness (inch)</td>
<td>Type and Min. Thickness (inch)</td>
<td>Fastener Type</td>
</tr>
<tr>
<td>3 5/8&quot;</td>
<td>20 (0.0478 inch)</td>
<td>16&quot; o.c.</td>
<td>Min. 5/8&quot; Type X gypsum wallboard complying with ASTM C36 or ASTM C1396</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm.

¹Combustible content of the foam plastic must not exceed an average potential heat content of 6,000 Btu/ft² (68.2 MJ/m²) in every 20-square-foot wall area.
²Floor levels must be blocked with 4-inch-thick (102 mm), 4 pcf (64.1 kg/m³) Thermafiber insulation (see ER-2331).