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:

BASF CORPORATION

3550 SAINT JOHNS BLUFF ROAD SOUTH
JACKSONVILLE, FLORIDA 32224

EVALUATION SUBJECT:

ACROCRETE® ACROWALL-ES PLUS AND ACROWALL-ES PLUS WITH CHANNELED INSULATION EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)
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:
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EVALUATION SUBJECT:
ACROCRETE® ACROWALL-ES PLUS AND ACROWALL-ES PLUS WITH CHANNELED INSULATION EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)

1.0 EVALUATION SCOPE
Compliance with the following codes:
- 2015 and 2012 International Residential Code® (IRC)

Properties evaluated:

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

2.0 USES
The Acrocrete® Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation Systems are exterior insulation and finish systems (EIFS) complying with IBC Section 1408 and IRC Section R703.9. The systems comply with the requirements of IBC Section 1408.4.1 and IRC Section R703.9 as EIFS with drainage.

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:
The Acrocrete® Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation Systems consist of a water-resistant barrier coating, adhesively applied flat or channeled insulation board, reinforcing mesh, base coat and finish coat. See Table 1 for system components.

3.2 Insulation Board:
The insulation board must be one of the following:

a. Acrocrete® Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation insulation board is expanded polystyrene (EPS) complying with ASTM C578, Type I and ASTM E2430; has a flame spread of 25 or less and a smoke developed index of 450 or less when tested in accordance with ASTM E84 or UL 723; is produced by a molder that participates in an approved third-party quality assurance program; and is labeled in accordance with Section 7.0 of this report. AcroWall Plus with Channeled Insulation is a channeled insulation board with vertical channels 1 inch wide by 1/4 inch deep (25.4 mm by 6.4 mm) spaced 11 inches (279 mm) apart.

b. EPS insulation board must comply with ASTM C578, Type I, and ASTM E2430, and must be produced by a molder with a current evaluation report.

c. 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; demonstrate 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 UL 723; and be labeled in accordance with Section 7.0.

3.3 Substrates:
- 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
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 Acrocrete<sup>®</sup> Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation Systems must be installed in accordance with the manufacturer’s installation instructions, specifications and details available at www.acrocrete.basf.com.

4.2 Drainage Options:
- Acrocrete<sup>®</sup> Acrowall-ES Plus: vertical ribbons of adhesive with flat insulation board.
- Acrocrete<sup>®</sup> Acrowall-ES Plus with Channeled Insulation: vertical ribbons of adhesive with channeled 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 qualified design professional.

4.4 Weather Protection:
The Acrocrete<sup>®</sup> Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation Systems comply with IBC Section 1403.2 and IRC Section R703.1.1.

4.5 Use in Types I through IV (Noncombustible) Construction:
Table 3 describes the assemblies qualified for use in Types I through IV construction (IBC).

4.6 Fire-resistance-rated Construction:
Table 4 describes the assemblies qualified for use in nonload-bearing fire-resistance-rated construction.

In addition, in Type V construction, the Acrocrete<sup>®</sup> Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation Systems may be attached to the surface of combustible exterior fire-resistance-rated assemblies described in IBC Table 721.1(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 of the water-resistive barrier coating must be conducted in accordance with the 2015 IBC Section 1705.16 (2012 IBC Section 1705.15).

5.0 CONDITIONS OF USE
The Acrocrete<sup>®</sup> Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation 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 BASF Corporation.

5.4 Termination of the systems must not be less than 6 inches (152 mm) above finished grade in accordance with the 2015 IBC Section 2603.8 (2012 IBC Section 2603.9) and IRC Section R318.4.

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.

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.

6.4 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated June 2015 (editorially revised May 2016).

7.0 IDENTIFICATION
Each container or package of the coating or reinforcing mesh used as part of the Acrocrete<sup>®</sup> Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation Systems must be labeled with the manufacturer’s name (BASF Corporation) and address; the product name; lot or batch number; quantity of material; storage instructions; pot life; expiration date; and the evaluation report number (ESR-2188).

Acrocrete<sup>®</sup> Acrowall-ES Plus and Acrowall-ES Plus with Channeled Insulation Systems insulation board must be labeled on the edge of each board with the BASF Corporation name, the plant identification number and the evaluation number (ESR-2188).

Other foam plastic insulation must be labeled in accordance with the current ICC-ES evaluation report in which it is recognized, or in accordance with IBC Sections 2603.2 and 2603.5.6, or IRC Section 316.2, as applicable.
### TABLE 1—SYSTEM COMPONENTS

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>WATER-RESISTIVE BARRIER OPTIONS</th>
<th>ADHESIVE OPTIONS</th>
<th>BASE COAT OPTIONS</th>
<th>REINFORCING MESH</th>
<th>FINISH OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AcroWall-ES Plus</td>
<td>AcroStop T</td>
<td>AcroBase 60</td>
<td>AcroBase 60</td>
<td>AcroMesh 4, 4.2 oz/yd², minimum¹</td>
<td>AcroTex</td>
</tr>
<tr>
<td>AcroWall-ES Plus with Channeled Insulation</td>
<td>MasterSeal AWB 660</td>
<td>AcroDry</td>
<td>AcroDry</td>
<td></td>
<td>AcroTex SIL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AcroFlex</td>
<td>AcroFlex SIL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AcroCote T²</td>
<td></td>
</tr>
</tbody>
</table>

¹Higher weight meshes are allowable.
²For aesthetic conditions, AcroCote T is applied over dry base coat at joints before installation of sealant.

### TABLE 2—WIND LOAD DESIGN

<table>
<thead>
<tr>
<th>FRAMING²</th>
<th>SUBSTRATE</th>
<th>EPS</th>
<th>Allowable Wind Load (psf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Maximum Spacing (inches)</td>
<td>EPS Min. Thickness (inch)</td>
<td>Coating</td>
</tr>
<tr>
<td>2x4 Wood¹</td>
<td>Min 7/16 inch wood structural panel, attached in accordance with the code</td>
<td>1</td>
<td>Systems described in Table 1 using AcroStop R</td>
</tr>
<tr>
<td>3⁵/₈-inch by No. 20 gage steel</td>
<td>16</td>
<td>ASTM C1396 gypsum sheathing or ASTM C177 glass-mat gypsum sheathing, attached with #6 x 1 1/4-inch buglehead screws at 8 inches on center</td>
<td>1</td>
</tr>
<tr>
<td>3³/₈-inch by No. 20 gage steel</td>
<td>Min 25/32 inch wood structural panel, attached in accordance with the code</td>
<td>1</td>
<td>Systems described in Table 1 using AcroStop T</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Concrete or concrete-masonry</td>
<td>1</td>
</tr>
</tbody>
</table>

¹Minimum 2x4 wood framing, minimum specific gravity 0.42.
²Maximum positive pressure is limited to the capacity of the concrete or concrete masonry substrate, determined in accordance with the applicable code.
³The framing members must be designed to resist all positive and negative transverse loads with a maximum allowable deflection of 1/240 of the span.

### TABLE 3—ASSEMBLIES²,³ FOR USE IN TYPES I THROUGH IV CONSTRUCTION

<table>
<thead>
<tr>
<th>FRAMING MEMBERS</th>
<th>INTERIOR SHEATHING</th>
<th>EXTERIOR SHEATHING</th>
<th>INSULATION BOARD THICKNESS MAXIMUM (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>Min. Depth (inches)</td>
<td>Max. Spacing (inches)</td>
<td>Type¹</td>
</tr>
<tr>
<td>3⁵/₈</td>
<td>20</td>
<td>16 oc</td>
<td>ASTM C36 or ASTM C1396</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm.
¹The fasteners are #6 x 1 1/4-inch-long bugle head screws.
²Coating system is as described in Table 1.
³When applied directly to concrete or masonry, the walls may be considered noncombustible construction.

### TABLE 4—FIRE-RESISTANCE RATED ASSEMBLIES²,³

<table>
<thead>
<tr>
<th>FRAMING MEMBERS</th>
<th>INTERIOR SHEATHING</th>
<th>EXTERIOR SHEATHING</th>
<th>INSULATION BOARD THICKNESS MAXIMUM (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>Min. Depth (inches)</td>
<td>Max. Spacing (inches)</td>
<td>Type¹</td>
</tr>
<tr>
<td>3⁵/₈</td>
<td>18</td>
<td>16 oc</td>
<td>ASTM C36 or ASTM C1396 Type X</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm.
¹The fasteners are #6 x 1 1/4-inch-long bugle head screws.
²Coating system is as described in Table 1.
³Rated from both sides.