**PER-08029-C**

**Initial Approval**
September, 2015

**Re-Approved**
April, 2018

See all Pei ES Listings at: www.p-e-i.com

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**Product**

<table>
<thead>
<tr>
<th>5/8&quot; (15.9mm)</th>
<th>USG Securock® Brand Firecode® X &amp; USG Securock® Brand Ultralight Firecode® X</th>
<th>1/2&quot; (12.7mm)</th>
<th>USG Securock® Brand Glass-Mat Sheathing &amp; USG Securock® Brand Ultralight Glass-Mat Sheathing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(with Improved Coated Mat)</td>
<td></td>
<td>(with Improved Coated Mat)</td>
</tr>
</tbody>
</table>

**General Details**

5/8" (15.9mm) **USG Securock Firecode X Glass-Mat Sheathing**, 5/8" (15.9mm) **USG Securock Ultralight Firecode X Glass-Mat Sheathing**, 1/2" (12.7mm) **USG Securock Glass-Mat Sheathing**, and 1/2" (12.7mm) **USG Securock Ultralight Glass-Mat Sheathing** all manufactured with the improved coated mat are manufactured at the plant locations listed on this PER. These plant locations have an approved Quality Control Manual to manufacture these products and are audited quarterly by Pei.

**Product Description**

5/8" (15.9mm) **USG Securock Firecode X Glass-Mat Sheathing**, 5/8" (15.9mm) **USG Securock Ultralight Firecode X Glass-Mat Sheathing**, 1/2" (12.7mm) **USG Securock Glass-Mat Sheathing**, and 1/2" (12.7mm) **USG Securock Ultralight Glass-Mat Sheathing**

are noncombustible coated exterior gypsum sheathing panels used under exterior claddings such as brick veneer, clapboard siding, panel siding, shingle siding, shake siding, and architecturally specified EIFS. Panels are available in a 48-in. width and standard lengths of 8-ft, 9-ft, and 10-ft, with square edges. Other sizes are available on special order.

**Compliance**

5/8" (15.9mm) **USG Securock Firecode X Glass-Mat Sheathing**:

- Meets or exceeds the requirements of ASTM C 1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
- Meets or exceeds the requirements for an Air Barrier Material when tested in accordance with ASTM E2178 and defined in the 2015 International Energy Conservation Code® (IECC).
- Meets or exceeds the requirements of gypsum sheathing in accordance with the 2015 IRC and the 2015 IBC.
- Non-combustible core when tested in accordance with ASTM E 136, and defined in 2015 IBC Section 703.5.2.
- Surface Burning Characteristics - Flame Spread 0 / Smoke Development 0 when tested in accordance with ASTM E 84.
- Meets Type X definition in accordance with ASTM C 1396 and ASTM C 1177 when tested in accordance with ASTM E 119.
- 5/8" (15.9mm) **USG Securock Firecode X Glass-Mat Sheathing** is classified by Underwriter's Laboratories, Inc. as to fire resistance, surface burning characteristics, and non-combustibility. See the UL Fire Resistance Directory for fire resistive design listings.
- Approved by City of Los Angeles Research Report RR 25748 as to compliance with the 2011 Los Angeles Building Code.
- Approved by State of Florida Product Approval FL 11429 as to compliance with the 2014 Florida Building Code for use outside High Velocity Hurricane Zones (HVHZ).
- Approved by Miami-Dade County Notices of Acceptance (NOA) for use as a substrate in specific EIFS clad wall & protected direct-applied soffit assemblies constructed within areas designated High Velocity Hurricane Zones (HVHZ). Visit the Miami-Dade County product Control Division website for approved assemblies.
Compliance continued

5/8" (15.9mm) USG Securock Ultralight Firecode X Glass-Mat Sheathing:
- Meets or exceeds the requirements of ASTM C 1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
- Meets or exceeds the requirements of gypsum sheathing in accordance with the 2015 IRC and the 2015 IBC.
- Non-combustible core when tested in accordance with ASTM E 136, and defined in 2015 IBC Section 703.5.2.
- Surface Burning Characteristics - Flame Spread 0 / Smoke Development 0 when tested in accordance with ASTM E 84.
- Meets Type X definition in accordance with ASTM C 1396 and ASTM C 1177 when tested in accordance with ASTM E 119.
- 5/8" (15.9mm) USG Securock Firecode X Glass-Mat Sheathing is classified by Underwriter's Laboratories, Inc. as to fire resistance, surface burning characteristics, and non-combustibility. See the UL Fire Resistance Directory for fire resistive design listings.
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1/2" (12.7mm) USG Securock Glass-Mat Sheathing:
- Meets or exceeds the requirements of ASTM C 1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
- Meets or exceeds the requirements for an Air Barrier Material when tested in accordance with ASTM E2178 and defined in the 2015 IECC.
- Meets or exceeds the requirements of gypsum sheathing in accordance with the 2015 IRC and the 2015 IBC.
- Surface Burning Characteristics - Flame Spread 0 / Smoke Development 0 when tested in accordance with ASTM E 84.
- Meets the requirements of a thermal barrier as defined by 2015 IBC Section 2603.4.
- Non-combustible core when tested in accordance with ASTM E 136, and defined in 2015 IBC Section 703.5.2.
- Approved by City of Los Angeles Research Report RR 25748 as to compliance with the 2011 Los Angeles Building Code.
- Approved by State of Florida Product Approval FL 11429 as to compliance with the 2014 Florida Building Code for use outside High Velocity Hurricane Zones (HVHZ).
- Approved by Miami-Dade County Notices of Acceptance (NOA) for use as a substrate in specific EIFS clad wall & protected direct-applied soffit assemblies constructed within areas designated High Velocity Hurricane Zones (HVHZ). Visit the Miami-Dade County product Control Division website for approved assemblies.

1/2" (12.7mm) USG Securock Ultralight Glass-Mat Sheathing:
- Meets or exceeds the requirements of ASTM C 1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
- Approved by State of Florida Product Approval FL 11429 as to compliance with the 2014 Florida Building Code for use outside High Velocity Hurricane Zones (HVHZ).
- Meets or exceeds the requirements of gypsum sheathing in accordance with the 2015 IRC and the 2015 IBC.
- Non-combustible core when tested in accordance with ASTM E 136, and defined in 2015 IBC Section 703.5.2.
- Surface Burning Characteristics - Flame Spread 0 / Smoke Development 0 when tested in accordance with ASTM E 84.
- Approved by City of Los Angeles Research Report RR 25748 as to compliance with the 2011 Los Angeles Building Code.
- Approved by State of Florida Product Approval FL 11429 as to compliance with the 2014 Florida Building Code for use outside High Velocity Hurricane Zones (HVHZ).
- Approved by Miami-Dade County Notices of Acceptance (NOA) for use as a substrate in specific EIFS clad wall & protected direct-applied soffit assemblies constructed within areas designated High Velocity Hurricane Zones (HVHZ). Visit the Miami-Dade County product Control Division website for approved assemblies.
General Product Usage and Limitations
1. These products shall be installed in accordance with ASTM C 1280 Standard Specification for Application of Gypsum Sheathing, GA-253 Application of Gypsum Sheathing, and the requirements of USG Product Literature.
2. These products shall not be used as a nail base. Mechanical attachment of exterior claddings must be made directly to the framing.
3. Securock can be installed on wood or steel framing. The maximum spacing for framing members is 24-in. o.c. The framing strength, fastener holding capacities of framing and fastener length information can be found in Tables 2 and 5.
4. Fasteners shall be driven flush with the panel surface without countersinking or being deep enough to break the glass mat.
5. These products may be applied with long dimensions parallel or perpendicular to framing members except where limited by specific requirements. Sheathing orientation and fastener spacing may be governed by local code, or by the requirements of shear, wind or fire-resistance-rated construction. Consult local codes and site-specific construction documents to ensure such requirements are met for every assembly prior to construction.
6. These products shall remain in their original unopened packaging at the site and stored in an enclosed shelter providing protection from physical damage and exposure to the elements until used. Protect these products from exposure to cascading water.
7. USG approves the use of pneumatic or gas-power-driven pin fasteners to attach Securock Glass-Mat Sheathing to cold-formed steel framing, provided the pin manufacturer has evaluated Securock with the pin fastener in accordance with ICC-ES AC259 Acceptance Criteria, and where permitted by local codes.

Tested to
ASTM E2178-11 - Standard Test Method for Air Permeance of Building Materials
UL 1715 - Fire Test of Interior Finish Materials.

Table 1 - Physical Properties

<table>
<thead>
<tr>
<th>Physical Property Test</th>
<th>1/2” Securock Glass-Mat Sheathing</th>
<th>1/2” Securock Ultralight Glass-Mat Sheathing</th>
<th>5/8” Securock Firecode X Glass-Mat Sheathing</th>
<th>5/8” Securock Ultralight Firecode X Glass-Mat Sheathing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Strength (ASTM C473-13) Minimum Breaking Load</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edge Perpendicular</td>
<td>100 lbf</td>
<td>100 lbf</td>
<td>140 lbf</td>
<td>140 lbf</td>
</tr>
<tr>
<td>Edge Parallel</td>
<td>80 lbf</td>
<td>80 lbf</td>
<td>100 lbf</td>
<td>100 lbf</td>
</tr>
<tr>
<td>Hardness (ASTM C473-13) Minimum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Test</td>
<td>15 lbf</td>
<td>15 lbf</td>
<td>15 lbf</td>
<td>15 lbf</td>
</tr>
<tr>
<td>End Test</td>
<td>15 lbf</td>
<td>15 lbf</td>
<td>15 lbf</td>
<td>15 lbf</td>
</tr>
<tr>
<td>Edge Test</td>
<td>15 lbf</td>
<td>15 lbf</td>
<td>15 lbf</td>
<td>15 lbf</td>
</tr>
<tr>
<td>Nail Pull Resistance (ASTM C473-13) Method B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Average Resistance</td>
<td>80 lbf</td>
<td>80 lbf</td>
<td>90 lbf</td>
<td>90 lbf</td>
</tr>
<tr>
<td>Water Resistance (ASTM C473-13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Absorption (% by weight)</td>
<td>10% max</td>
<td>10% max</td>
<td>10% max</td>
<td>10% max</td>
</tr>
<tr>
<td>ASTM E84-13 Surface Burning</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flame / Smoke Developed Index</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td>ASTM C518 Thermal Resistance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal Resistance - R (K M2/W)</td>
<td>0.079</td>
<td>--</td>
<td>0.088</td>
<td>--</td>
</tr>
<tr>
<td>Thermal Resistance R (°F ft2/h/BTU)</td>
<td>0.45</td>
<td>--</td>
<td>0.5</td>
<td>--</td>
</tr>
<tr>
<td>ASTM E96 Water Vapor Transmission (Procedure A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Permeance</td>
<td>29.7</td>
<td>34.4</td>
<td>28.5</td>
<td>28.6</td>
</tr>
</tbody>
</table>
### Table 2 - Design Shear Loads for Securock & Securock Ultralight

<table>
<thead>
<tr>
<th>Sheathing</th>
<th>Framing3,5</th>
<th>Maximum Height to Width Aspect Ratio</th>
<th>Fastener1,2</th>
<th>Fastener Spacing3 (inches o.c. around Perimeter, in Field)</th>
<th>Design Shear6,7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; Securock Parallel to Framing</td>
<td>16&quot; o.c.</td>
<td>1:1</td>
<td>#6-18 Bugle head Screw</td>
<td>4 and 8</td>
<td>123.4 plf</td>
</tr>
<tr>
<td>1/2&quot; Securock Parallel to Framing</td>
<td>16&quot; o.c.</td>
<td>1:1</td>
<td>Hot Dipped Galv. Roofing Nail</td>
<td>4 and 8</td>
<td>122.0 plf</td>
</tr>
<tr>
<td>5/8&quot; Securock Firecode X Parallel to Framing</td>
<td>24&quot; o.c.</td>
<td>1:1</td>
<td>#6-18 Bugle head Screw</td>
<td>4 and 8</td>
<td>138.1 plf</td>
</tr>
<tr>
<td>5/8&quot; Securock Firecode X Parallel to Framing</td>
<td>24&quot; o.c.</td>
<td>1:1</td>
<td>Hot Dipped Galv. Roofing Nail</td>
<td>4 and 8</td>
<td>148.3 plf</td>
</tr>
</tbody>
</table>

Notes:
1. #6 Screws must have a minimum head dia. of .325"
2. Roofing Nails must have a minimum head dia. of .372"
3. The perimeter of the sheathing must be supported by framing members and / or blocking.
4. The Nails & Screws must have a minimum edge distance of 3/8".
5. Framing to be nominal 2 x 4 No.1 Grade S.Y.P. minimum
6. Allowable shear values are for short term wind loads.
7. Shear wall anchorage is outside of the scope of this report.
8. The values in this table are based on testing per ASTM E72 and represent the ultimate capacity of the sheathing to resist fastener pull-through and/or flexural failure using a 3.0 Safety Factor.
9. The sheathing can be installed parallel to the framing.

### Table 3 - Windload Design Pressure - Securock & Securock Ultralight

<table>
<thead>
<tr>
<th>Fastener Spacing</th>
<th>12&quot; o.c.</th>
<th>16&quot; o.c.</th>
<th>24&quot; o.c.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot; Allowable Pressure</td>
<td>96</td>
<td>67</td>
<td>50</td>
</tr>
<tr>
<td>5/8&quot; Allowable Pressure</td>
<td>75</td>
<td>35</td>
<td>26</td>
</tr>
<tr>
<td>1/2&quot; Allowable Pressure</td>
<td>75</td>
<td>35</td>
<td>26</td>
</tr>
</tbody>
</table>

Notes:
1. The panel can be installed perpendicular or parallel to the framing.
2. #6 Buglehead screws with an average head dia. of .327"
3. The screws must have a minimum edge distance of 3/8".
4. Allowable values are for short term wind loads.
5. The values in this table are based on testing per ASTM E330 and represent the ultimate capacity of the panel to resist fastener pull-through and/or flexural failure using a 3.0 Safety Factor. The withdrawal resistance of fasteners from framing is different on several factors including but not limited to fastener type, fastener length and framing properties. The specification of fasteners is the responsibility of the designer of record.
6. Framing and bracing are beyond the scope of this evaluation report.
**Product Labeling**

Each panel of Securock, Securock Ultralight, Securock Firecode X Glass-Mat Sheathing and Securock Ultralight Firecode X Glass-Mat Sheathing that is covered by this PER, must be marked with the following information:

1. USG Name
2. Product Name
3. Plant Identifier & Date Code
4. This PER Number & Pei Evaluation Service® Name or Logo
5. UL Backstamp Information for Fire Resistance (5/8" Only)
6. ICC-ES ESR-3044
7. Approval by City of Los Angeles Research Report RR25748
8. Florida Product Approval FL11429
9. Miami-Dade County Notice of Acceptance

**Acceptable Evaluation Marks**

![Acceptable Evaluation Marks](image)

**Figure 1 - USG Securock® Brand Glass-Mat Sheathing Face Mat**

![Figure 1](image)

**Figure 2 - CGC Securock® Brand Glass-Mat Sheathing Face Mat**

![Figure 2](image)
Product Documentation
A Product Evaluation Service Agreement between Pei Evaluation Service® and USG Corporation
A Follow-up Inspection Service Agreement between Progressive Engineering Inc. and USG Corporation
A USG Corporation Quality Control Manual - Dated: 4/16/2018
USG Securock Glass-Mat Sheathing Installation Guide No. WB2451/Rev. 5/2015
USG Securock Glass-Mat Sheathing Submittal Sheet No. WB2452/Rev. 6/2015
SDS for Securock® Glass-Mat Sheathing Panels - No. 54000004002A - Dated: 3/24/2017
A Pei test report No. 2014-1069 (B) - ASTM C297 Flatwise Tensile Strength Tests on 5/8” USG Securock Glass-Mat Sheathing with Coated Atlas Mat (WT ES 9000) - Dated: 7/30/2014
A Pei test report No. 2014-1069 (C) - ASTM E96 Water Vapor Transmission Tests on 1/2” and 5/8” USG Securock Glass-Mat Sheathing with Coated Atlas Mat (WT ES 9000) Tested to Procedure A - Dessicant Method - Dated: 7/21/2014
A Pei test report No. 2008-1099 (H) - ASTM E330 Negative Wind Load Test on Dry 1/2” USG Securock Glass-Mat Sheathing on Lumber Framing - Dated: 10/20/2008 - Stamped by a professional engineer.
A Pei test report No. 2008-1099 (I) - ASTM E330 Negative Wind Load Test on Dry 1/2” USG Securock Glass-Mat Sheathing on Lumber Framing - Dated: 10/20/2008 - Stamped by a professional engineer.
A Pei test report No. 2008-1099 (J) - ASTM E330 Negative Wind Load Test on Dry 1/2” USG Securock Glass-Mat Sheathing on Lumber Framing - Dated: 10/28/2008 - Stamped by a professional engineer.
A Pei test report No. 2008-1099 (K) - ASTM E330 Negative Wind Load Test on Dry 1/2” USG Securock Glass-Mat Sheathing on Lumber Framing - Dated: 10/15/2008 - Stamped by a professional engineer.
A Pei test report No. 2008-1853 (E) - ASTM E330 Negative Windload Test on Dry 5/8” USG Securock Firecode X Glass-Mat Sheathing Vertical on 16” o.c. Lumber Framing Using Screws - Dated: 12/16/2008 - Stamped by a professional engineer.
A Pei test report No. 2008-1853 (F) - ASTM E330 Negative Windload Test on Dry 5/8” USG Securock Firecode X Glass-Mat Sheathing Horizontal on 24” o.c. Lumber Framing Using Screws - Dated: 12/18/2008 - Stamped by a professional engineer.
A Pei test report No. 2008-1853 (G) - ASTM E330 Negative Windload Test on Dry 5/8” USG Securock Firecode X Glass-Mat Sheathing Vertical on 24” o.c. Lumber Framing Using Screws - Dated: 12/19/2008 - Stamped by a professional engineer.
A Pei test report No. 2009-0863 (A) - ASTM E330 Negative Windload Test on Dry 5/8” USG Securock Firecode X Glass-Mat Sheathing Vertical on 12” o.c. Lumber Framing Using Screws 4” o.c. - Dated: 7/17/2009 - Stamped by a professional engineer.
A Pei test report No. 2009-0863 (B) - ASTM E330 Negative Windload Test on Dry 5/8” USG Securock Firecode X Glass-Mat Sheathing Vertical on 12” o.c. Lumber Framing Using Screws 4” o.c. - Dated: 7/23/2009 - Stamped by a professional engineer.
A Pei test report No. 2016-379 (B) - ASTM E330 Negative Windload Test on 5/8” USG Securock Ultralight Firecode X Glass-Mat Sheathing (Vertical) on 16” o.c. Lumber Framing Using Screws 8” o.c. - Dated: 3/9/2016
A Pei test report No. 2016-1002 (A) - ASTM E330 Negative Windload Test on 5/8” USG Securock Ultralight Firecode X Glass-Mat Sheathing (Vertical) on 12” o.c. Lumber Framing Using Screws 4” o.c. - Dated: 5/24/2016
A Pei test report No. 2016-1002 (B) - ASTM E330 Negative Windload Test on 5/8” USG Securock Ultralight Firecode X Glass-Mat Sheathing (Vertical) on 24” o.c. Lumber Framing Using Screws 4” o.c. - Dated: 5/25/2016
A test report No. 2016-1002 (C) - ASTM E330 Negative Windload Test on 5/8" USG Securock Ultralight Firecode X Glass-Mat Sheathing (Vertical) on 12" o.c. Lumber Framing Using Screws 6" o.c. - Dated: 5/26/2016

A test report No. 2016-1249 (B) - ASTM E330 Negative Windload Test on 1/2" USG Securock Ultralight Glass-Mat Sheathing (Vertical) on Various Lumber Frame and Screw Spacings - Dated: 7/25/2016


A test report No. 2008-1099 (B) - ASTM E96 Water Vapor Transmission Test on 1/2" USG Securock Glass-Mat Sheathing - Dated: 11/07/2008 - Stamped by a professional engineer.


A test report No. 2016-1249 (D) - ASTM E96 Water Vapor Transmission Test on 1/2" USG Securock Ultralight Glass-Mat Sheathing Tested to Procedure A - Desiccant Method and Tested to Procedure B - Water Method - Dated: 7/28/2016


UL Test Report 08CA05754 - Tests in accordance with:
ASTM E119-00a - Fire Tests of Building Construction and Materials - Dated: 5/14/2009 - Stamped by a Professional Engineer
UL Test Report 09CA06340 - Tests in accordance with:
UL 1715 - Standard Fire Test of Interior Finish Materials - Dated: 5/14/2009 - Stamped by a Professional Engineer


UL Project 4787336638 - ASTM E119-00a - Fire Tests of Building Construction and Materials Investigation, Dated March 03, 2016


Miami-Dade County Notice of Acceptance - NOA No. 17-0919.03 - Dated: 6/20/2018
