

## ICC-ES Evaluation Report

**ESR-2227\***

Reissued February 1, 2012

This report is subject to renewal February 1, 2014.

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**DIVISION: 07 00 00—THERMAL AND MOISTURE  
PROTECTION****Section: 07 65 00—Flexible Flashings****REPORT HOLDER:**

**HUBER ENGINEERED WOODS LLC**  
**ONE RESOURCE SQUARE**  
**10925 DAVID TAYLOR DRIVE, SUITE 300**  
**CHARLOTTE, NORTH CAROLINA 28262**  
**(800) 933-9220**  
[www.huberwood.com](http://www.huberwood.com)

**EVALUATION SUBJECT:****ZIP SYSTEM™ FLEXIBLE FLASHING TAPE****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)

**Property evaluated:**

Water resistance

**2.0 USES**

ZIP System™ Flexible Flashing Tape is a pressure-sensitive, self-adhering, cold-applied tape used as flashing around windows, frames, door frames, wall penetrations and roof penetrations described in this report when used with the materials and substrates noted in Section 5.3. The use of the tape as a flashing material is recognized for use on Type V construction under the IBC and non-fire-resistance-rated construction recognized under the IBC and IRC.

**3.0 DESCRIPTION**

ZIP System™ Flexible Flashing Tape is a pressure-sensitive tape consisting of a polyolefin film with an acrylic adhesive. The tape is nominally 0.012 inch thick [0.30 mm (12 mils)] and is produced in rolls of various widths, [minimum 3<sup>3</sup>/<sub>4</sub> inches (95 mm)] and lengths.

**4.0 INSTALLATION**

Installation of ZIP System™ Flexible Flashing Tape must comply with this report and the manufacturer's published installation instructions. The installation instructions must be available at the jobsite at all times during installation.

The surfaces to which the tapes are applied must be dry and free of frost, dust and dirt, loose nails, and other protrusions. Contact of the adhesive surface with foreign

matter that may affect the bond to the substrate must be avoided. The ambient air and substrate temperatures must be at or above 20°F (-6.7°C) at the time of application.

The tape is applied around penetrations in the manner described in the tape manufacturer's, as well as the window or door manufacturer's, published installation instructions, as applicable. End joints must be overlapped the minimum distance specified in the manufacturer's published installation instructions. The tape is cut to the desired length and firmly pressed into the entire length of the opening and smoothed out until it conforms tightly to the frame opening. Wrinkles or trapped air bubbles must be removed in accordance with the manufacturer's published installation instructions.

**5.0 CONDITIONS OF USE**

The Huber Engineered Woods ZIP System™ Flexible Flashing Tape 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 and the manufacturer's published installation instructions. In the event of conflict between this report and the installation instructions, this report governs.
- 5.2** The ZIP System™ Flexible Flashing Tape must not be left exposed to the weather or installed where it is subject to permanent direct weather exposure.
- 5.3** Installation of the tape as a flashing material is limited to use with OSB, wood, steel, aluminum and vinyl-framed flanged windows and door frames, transitions to rigid flashings and the proprietary wall and roof sheathing substrates recognized in ICC-ES evaluation reports [ESR-1473](#) and [ESR-1474](#).

**6.0 EVIDENCE SUBMITTED**

Data in accordance with the ICC-ES Acceptance Criteria for Flexible Flashing Materials (AC148), dated February 2011 (2009 IBC and IRC); and AC148, dated June 2006, [editorially revised December 2010 (2006 IBC and IRC)].

**7.0 IDENTIFICATION**

The Huber Engineered Woods ZIP System™ Flexible Flashing Tape described in this report is labeled at regular intervals with the manufacturer's identification (ZIP System™) and the evaluation report number (ESR-2227). The tape packaging is labeled with the manufacturer's name (Huber Engineered Woods LLC) and address and the evaluation report number (ESR-2227).

**\*Revised April 2012**

**ICC-ES Evaluation Report****ESR-2227 FBC Supplement**

Issued June 1, 2012

*This report is subject to renewal on February 1, 2014.*

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**EVALUATION SUBJECT:****ZIP SYSTEM™ FLEXIBLE FLASHING TAPE****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that ZIP System™ Flexible Flashing Tape, recognized in ICC-ES master evaluation report ESR-2227, has also been evaluated for compliance with the codes noted below.

**Applicable code editions:**

- 2010 and 2007 *Florida Building Code—Building*
- 2010 and 2007 *Florida Building Code—Residential*

**2.0 CONCLUSIONS**

The ZIP System™ Flexible Flashing Tape, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2227, complies with the 2010 *Florida Building Code—Building* and the 2010 *Florida Building Code—Residential*, provided the design and installation are in accordance with the *International Building Code*® (IBC) provisions noted in the master report.

Use of the ZIP System™ Flexible Flashing Tape for compliance with the High-Velocity Hurricane Zone provisions of the 2010 *Florida Building Code—Residential* has not been evaluated, and is outside the scope of this supplemental report.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report reissued on February 1, 2012.

**ICC-ES SAVE: Verification of Attributes Report™****VAR-1012**

Reissued September 1, 2011

*This report is subject to renewal in two years.*[www.icc-es.org/save](http://www.icc-es.org/save) | 1-800-423-6587 | (562) 699-0543 A Subsidiary of the International Code Council®**DIVISION: 06 00 00—WOOD, PLASTICS AND  
COMPOSITES****Section: 06 16 00—Sheathing****DIVISION: 07 00 00—THERMAL AND MOISTURE  
PROTECTION****Section: 07 25 00—Water-Resistive Barriers/Weather  
Barriers****REPORT HOLDER:**

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**EVALUATION SUBJECT:**

**ADVANTECH® (AT-SERIES) SHEATHING SPAN;  
ADVANTECH® (AT-SERIES) FLOOR SPAN; ZIP SYSTEM®  
ROOF SHEATHING; ZIP SYSTEM® WALL SHEATHING**

**1.0 EVALUATION SCOPE****Compliance with the following evaluation guidelines:**

- ICC-ES Evaluation Guideline for Determination of Biobased Material Content (EG102), dated October 1, 2008 (editorially revised July 2009).
- ICC-ES Evaluation Guideline for Determination of Regionally Extracted, Harvested or Manufactured Materials or Products (EG104), dated October 1, 2008
- ICC-ES Evaluation Guideline for Determination of Formaldehyde Emissions of Composite Wood and Engineered Wood Products (EG108), dated October 1, 2008 (editorially revised July 2009).
- ICC-ES Evaluation Guideline for Determination of Certified Wood and Certified Wood Content in Products (EG109), dated October 1, 2008.

**Compliance eligibility with the applicable sections of the following green building rating systems, standards and codes:**

- National Green Building Standard (ICC 700-2008) (see Table 2 for details)
- LEED for Homes 2008 (see Table 3 for details)
- LEED 2009 for New Construction and Major Renovations (see Table 4 for details)

- LEED 2009 for Schools New Construction and Major Renovations (see Table 5 for details)
- 2010 California Green Building Standards Code (CALGreen), Title 24, Part 11 (see Table 6 for details)
- International Green Construction Code – Public Version 2.0 (IGCC PV2.0) (see Table 7 for details)
- ANSI/GBI 01-2010 – Green Building Assessment Protocol for Commercial Buildings (see Table 8 for details)

**2.0 USES**

AdvanTech® (AT-Series) Sheathing Span, AdvanTech® (AT-Series) Floor Span, ZIP System® Roof Sheathing and ZIP System® Wall Sheathing are used for a variety of interior and exterior framing and sheathing applications.

**3.0 DESCRIPTION**

AdvanTech® (AT-Series) Sheathing Span and AdvanTech® (AT-Series) Floor Span wood structural panels are Exposure 1 oriented strand board (OSB) panels manufactured with strands from a single wood species or a combination of wood species blended with an exterior-type adhesive system to comply with U.S. Voluntary Product Standard PS-2 and the applicable ICC-ES report as indicated in Table 1.

ZIP System® Roof Sheathing and ZIP System® Wall Sheathing wood structural panels are OSB panels with laminated resin-impregnated Kraft paper facers manufactured to comply with U.S. Voluntary Product Standard PS-2 and the applicable ICC-ES reports as indicated in Table 1. The panels are installed with ZIP System® self-adhering membrane tape. The tape is outside the scope of this evaluation report.

**4.0 CONDITIONS****4.1 Code Compliance:**

AdvanTech® (AT-Series) Sheathing Span, AdvanTech® (AT-Series) Floor Span, ZIP System® Roof Sheathing and ZIP System® Wall Sheathing have been evaluated for compliance with the requirements of the International Codes as listed in Table 1 of this report.

**4.2 Green Rating Systems, Standards and Code Eligibility:**

The information presented in Tables 2 through 8 of this report provides a matrix of areas of evaluation and corresponding limitations and/or additional project-specific requirements, and offer benefit to individuals who are assessing eligibility for credits or points.

The final interpretation of the specific requirements of the respective green building rating system, standard and/or code rests with the developer of that specific rating system or standard or the Authority Having Jurisdiction, as applicable.

Compliance with items noted as “Verified Attribute” is subject to any conditions noted in the tables. Decisions on compliance with those items noted as “Eligible for Points” in Tables 2 through 8 rests with the user of this report, and those items are subject to the conditions noted. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. Rating systems or standards often provide supplemental information as guidance.

**5.0 BASIS OF EVALUATION**

The information in this report, including the “Verified Attribute,” is based upon the following supporting documentation:

- 5.1 ICC-ES EG102 [evaluation applies to ICC 700 Section 606.1(2); CALGreen Section A5.405.2; IGCC PV2.0 Section 503.2.4; ANSI/GBI 01-2010 Section 10.1.2.2].
- 5.2 ICC-ES EG104. [evaluation applies to ICC 700 Section 608.1; LEED Homes MR 2.2(c); LEED NC MR 5; LEED Schools MR 5; CALGreen Section A5.405.1; IGCC PV2.0 Section 503.2.5; ANSI/GBI 01-2010 Section 10.1.4.1].
- 5.3 ICC-ES EG108 [evaluation applies to ICC 700 Section 901.4(6); LEED NC IEQ 4.4; LEED Schools IEQ 4.4; IGCC PV2.0 Section 806.1].

- 5.4 ICC-ES EG109 (evaluation applies to ICC 700 Section 606.2; LEED Homes MR 2.1; LEED NC MR 7; LEED Schools MR 7; CALGreen Section A5.405.2.1; ANSI/GBI 01-2010 Section 10.3.2.1).
- 5.5 Documentation establishing and documenting all major sources of primary manufacturing energy (evaluation applies to ICC 700 Section 606.3).
- 5.6 ICC-ES [ESR-1474](#) documenting that ZIP System Wall Sheathing is equivalent to a code-prescribed water-resistive barrier (evaluation applies to ICC 700 Section 602.9).
- 5.7 Refer to ICC-ES [ESR-1474](#) for evaluation of the ZIP System Wall Sheathing as an air barrier assembly (evaluation applies to ICC 700 Section 703.2.1; LEED Homes EA 3).
- 5.8 ICC-ES reports listed in Table 1 [evaluation applies to ICC 700 Section 901.4(1); IGCC Section 806.1].

**6.0 IDENTIFICATION**

AdvanTech® (AT-Series) Sheathing Span, AdvanTech® (AT-Series) Floor Span, ZIP System® Roof Sheathing and ZIP System® Wall Sheathing products are identified with a stamp noting the manufacturer’s name (Huber Engineered Woods LLC) and address, the product name the manufacturing location, the ICC-ES evaluation report number (if applicable), and the name or logo of the inspection or grading agency. The report subjects are also identified on the product and/or packaging with the VAR number (VAR-1012) and the ICC-ES SAVE Mark, as applicable.

**TABLE 1—REFERENCE STANDARD OR EVALUATION REPORT NUMBER FOR HUBER ENGINEERED WOODS LLC PRODUCTS**

PRODUCT	REPORT NUMBER/ REFERENCE STANDARD
AdvanTech® (AT-Series) Sheathing Span AdvanTech® (AT-Series) Floor Span	<a href="#">ESR-1785</a>
ZIP System® Roof Sheathing	<a href="#">ESR-1473</a> <a href="#">ESR-2227</a>
ZIP System® Wall Sheathing	<a href="#">ESR-1474</a> <a href="#">ESR-2227</a>

TABLES 2 THROUGH 8

Section Number	Section Intent	Possible Points	Conditions of Use to Qualify	AdvanTech Sheathing	AdvanTech Flooring	ZIP System Roof Sheathing	ZIP System Wall Sheathing
<b>TABLE 2—SUMMARY OF AREAS OF ELEGIBILITY WITH THE NATIONAL GREEN BUILDING STANDARD (ICC 700-2008)</b>							
602.9	Water-resistive barrier	Mandatory	Install a water-resistive barrier and/or drainage plan system behind exterior veneer and/or siding				●
606.1(2)	Two types of biobased materials are used, each for more than 1 percent of the project's projected building material cost	6	To earn 6 points products must be at least 1% of the construction material cost AND another bio-based product at 1% of material cost must be used. 1 or 3 points are available for greater than 0.5%	●	●	●	●
606.2(1)	Two certified wood-based products are used for minor elements of the building, such as all walls, floors or roof	3	To earn 3 points a second certified wood product must also be used as a minor element <sup>1</sup>	●	●	●	●
606.2(2)	Two certified wood-based products are used for major elements of the building, such as all walls, floors or roof	4	To earn 4 points a second certified wood product must also be used as a major element <sup>1</sup>	●	●	●	●
606.3	Materials are used for major components of the building that are manufactured using a minimum of 33 percent of the primary manufacturing process energy derived from renewable sources, combustible waste sources, or renewable energy credits	2 each 6 max	To earn 6 points the products must be used for at least 3 major components of the building. 2 points may be earned when used for each major component.	●	●	●	●
608.1	Indigenous materials	2 each 10 max	To earn 2 points verify local products are originated, produced, grow naturally or occur naturally within 500 miles (805 km) of job site. Regional material calculations based on project location provided by Huber upon request.	○	○	○	○
703.2.1	Insulation and air sealing	3 15 max	Insulation and air sealing is installed in accordance with all the following, as applicable: (1) third-party verification performed 15 pts, no third-party verification performed 3 pts (2)				○
901.4(1)	Structural plywood used for floor, wall, and/or roof sheathing complies with DOC PS 1 and/or DOC PS 2. OSB used for floor, wall, and/or roof sheathing complies with DOC PS 2. The panels are made with moisture-resistant adhesives and the trademark indicates the adhesives are Exposure 1 or Exterior (plywood) and Exposure 1 (OSB)	Mandatory	To meet this a minimum of 85% of OSB or plywood in the building must consist of Huber products	●	●	●	●
901.4(6)	Non-emitting products, which can include structural wood framing	4	A minimum of 85% of product in the building are the identified Huber products	●	●	●	●

- = Eligible for points
- = Verified attribute
- 
 = This provision does not apply to this product

Note: Footnotes are located after Table 8.

**TABLES 2 THROUGH 8 (Continued)**

Section Number	Section Intent	Possible Points	Conditions of Use to Qualify for Points	AdvanTech Sheathing	AdvanTech Flooring	ZIP System Roof Sheathing	ZIP System Wall Sheathing
<b>TABLE 3—SUMMARY OF AREAS OF ELEGIBILITY WITH USGBC'S LEED FOR HOMES 2008</b>							
EA 3	Air Infiltration	3 max	To earn 2 or 3 points meet the air leakage requirements shown in Table 17 of the standard, as applicable	○	○	○	○
MR 2.1	FSC certified tropical wood	0.5 each 8 max	To earn 0.5 point per component use FSC-certified tropical wood <sup>2</sup>	2	2	2	2
MR 2.2(c)	Environmentally preferable products for roof, wall and floors; interior and exterior framing and sheathing	0.5 each 8 max	To earn points use products that are extracted, processed and manufactured within 500 miles (805 km) of the site for a minimum of 90% (by weight or volume of the component. Regional material calculations based on project location provided by Huber upon request.	○	○	○	○
<b>TABLE 4—SUMMARY OF AREAS OF ELEGIBILITY WITH USGBC'S LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATION</b>							
MR 5 (MR 5.1)	Regional materials (10% of content)	1	To earn 1 point use products that are extracted, processed and manufactured within 500 miles (805 km) of the site for a minimum of 10% (by cost) of total materials value. To earn 2 points use a minimum of 20%. Regional material calculations based on project location provided by Huber upon request.	○	○	○	○
MR 5 (MR 5.2)	Regional materials (20% of content)	2		○	○	○	○
MR 7	Certified wood	1	To earn 1 point use a minimum 50% (based on cost) of wood-based materials/products certified to FSC requirements <sup>2</sup>	2	2	2	2
IEQ 4.4	Low emitting materials	1	To earn 1 point use wood composite wood products containing no-added urea-formaldehyde resins	●	●	●	●
<b>TABLE 5—SUMMARY OF AREAS OF ELEGIBILITY WITH USGBC'S LEED 2009 FOR SCHOOLS NEW CONSTRUCTION AND MAJOR RENOVATION</b>							
MR 5 (MR 5.1)	Regional materials (10% of content)	1	To earn 1 point use products that are extracted, processed and manufactured within 500 miles (805 km) of the site for a minimum of 10% (by cost) of total materials value. To earn 2 points use a minimum of 20%. Regional material calculations based on project location provided by Huber upon request.	○	○	○	○
MR 5 (MR 5.2)	Regional materials (20% of content)	2		○	○	○	○
MR 7	Certified wood	1	To earn 1 point use a minimum 50% (based on cost) of wood-based materials/products certified to FSC requirements <sup>2</sup>	2	2	2	2
IEQ 4.4	Low emitting materials	1	To earn 1 point use wood composite wood products containing no-added urea-formaldehyde resins	●	●	●	●
○	= Eligible for points						
●	= Verified attribute						
	= This provision does not apply to this product						

Note: Footnotes are located after Table 8.

**TABLES 2 THROUGH 8 (Continued)**

Section Number	Section Intent	Possible Points	Conditions of Use to Qualify for Points	AdvanTech Sheathing	AdvanTech Flooring	ZIP System Roof Sheathing	ZIP System Wall Sheathing
<b>TABLE 6—SUMMARY OF AREAS OF ELEGIBILITY WITH 2010 CALIFORNIA GREEN BUILDING STANDARDS CODE</b>							
705.1	Regional materials	N/A	Verify local products that are extracted, processed and manufactured within California or 500 miles (805 km) of the job site. Regional material calculations based on project location provided by Huber upon request.	○	○	○	○
705.2	Bio-based materials	N/A	All Huber wood products are qualified as biobased	●	●	●	●
705.2.1	Certified Wood	N/A	Under review by California Building Standards Commission <sup>3</sup>	N/A	N/A	N/A	N/A
707.1	Water-resistant exterior wall assembly	N/A	Huber products provide a water-resistant exterior wall envelope				○
804.4.4	Composite wood product emissions	N/A	EWP products do not apply to the composite wood product definition <sup>4</sup>				
<b>TABLE 7—SUMMARY OF AREAS OF ELEGIBILITY WITH INTERNATIONAL GREEN CONSTRUCTION CODE – PUBLIC VERSION 2.0 (IGCC PV2.0)</b>							
503.2.4(2)	Biobased products	N/A	All Huber wood products are qualified as biobased	●	●	●	●
503.2.5	Indigenous materials	N/A	To earn credits use products that are extracted, processed and manufactured within 500 miles (805 km) of the site for a minimum of 90% (by weight or volume of the component. Regional material calculations based on project location provided by Huber upon request.	○	○	○	○
606.1.2.1.1	Air barrier installation		Install the system in accordance with the manufacturer's installation instructions and ICC-ES evaluation report <a href="#">ESR-1474</a>				●
806.1	Formaldehyde emissions	N/A	Huber wood structural panels comply with US DOC PS 2 (See Table 1 of this report) and meet the requirements of Table 806.1	●	●	●	●
<b>TABLE 8—SUMMARY OF AREAS OF ELEGIBILITY WITH ANSI/GBI 01-2010 – GREEN BUILDING ASSESSMENT PROTOCOL FOR COMMERCIAL BUILDINGS</b>							
10.1.2.2	Biobased Products - building assemblies	7 max	All Huber wood products are qualified as biobased	●	●	●	●
10.1.4.1	Regional Materials - building assemblies	5 max	To earn credits use products that are extracted, processed and manufactured within 500 miles (805 km) of the site for a minimum of 90% (by weight or volume of the component. Regional material calculations based on project location provided by Huber upon request.	○	○	○	○
10.3.2.1	Certified wood	6	Between 10% and 60% or more of wood-based products used in the building are third party certified	●	●	●	●
○	= Eligible for points						
●	= Verified attribute						
	= This provision does not apply to this product						

<sup>1</sup>Certification is required of the manufacturer only. Vendor Chain of Custody is not required to qualify for this point.

<sup>2</sup>Forest certification credit currently resources FSC exclusively. Credit of other certification schemes may be at the discretion of the verifier.

<sup>3</sup>CGBSC recognizes importance of use of certified forest products however the specific requirements are currently under development.

<sup>4</sup>This area is not to be confused with the provisions of EQ 4.4 in LEED (Table 4) because the California Air Resources Board (CARB) does not regulate engineered wood product emissions.

N/A = Not applicable