ICC-ES Evaluation Report

ESR-1258

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION **Section: 07 46 33—Plastic Siding**	**REPORT HOLDER: ASSOCIATED MATERIALS, INC., ALSIDE DIVISION**	**EVALUATION SUBJECT: ALSIDE PREMIUM VINYL WALL SIDINGS**	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)

Properties evaluated:

- Durability
- Exterior veneer
- Wind load resistance

2.0 USES

Alside Premium Vinyl Wall Sidings are used as exterior wall coverings over an approved sheathing capable of supporting the imposed loads, including but not limited to positive transverse wind load; and as a closure material on the underside of exposed eaves (soffits).

3.0 DESCRIPTION

Alside Premium Vinyl Wall Sidings are extruded from polyvinyl chloride (PVC) resins and conform to the requirements of ASTM D3679. The panels are available in different colors and with a smooth finish or an embossed matt or wood grain texture. The sidings have a variety of thicknesses and profiles. Refer to Table 1 of this report for the panel names, thicknesses, lengths and profiles of sidings. Table 2 of this report indicates the styles and characteristics of the vinyl soffit panels. Accessory items such as corners, starter strips, J-channels and trim are manufactured of the same material as the sidings.

4.0 INSTALLATION

4.1 General:

Installation of the Alside Premium Vinyl Wall Sidings, including the panels, corners, starter strips, trim and other accessory items, shall be in accordance with ASTM D4756, Section 1405.14.1 of the 2015, 2012 and 2009 IBC, Section 1405.13.1 of the 2006 IBC, Section R703.3.3 of the 2015 IRC, Section R703.4 of the 2012, 2009 and 2006 IRC, the manufacturer's published installation instructions, and this report.

The siding shall be installed over solid sheathing with an approved water-resistive barrier as required by the applicable code. Flashing in accordance with the applicable code shall be installed at all openings, penetrations, and abutments with dissimilar materials, and at terminations of the sidings and soffit, to maintain the weather tightness of the assembly.

In order to maintain the design wind pressure identified in Tables 3 and 4 of this report, the wood stud framing or wood furring strips shall have a minimum specific gravity of 0.42. Additionally, such furring strips, wood framing materials and related fastenings shall be of sufficient strength to resist the imposed loads required by the applicable code. Fasteners for attaching the siding to framing or furring strips shall be of the size and type set forth in Tables 3 and 4 of this report. Fasteners shall be installed through the center of the nailing slots at the spacing indicated in Tables 3 and 4 of this report, based upon the design wind pressure, leaving a minimum $^{1}/_{32}$-inch (0.8 mm) space between the fastener head and the vinyl nailing hem, so as not to restrict movement due to expansion and contraction.

A $^{1}/_{4}$-inch (6.4 mm) gap shall be provided at all openings and terminations for expansion and contraction. Joints between panels shall be overlapped a minimum of 1 inch (25.4 mm).

4.2 Wind Resistance:

4.2.1 General: The design wind pressures for the Alside Premium Vinyl Wall Sidings products determined in accordance with Chapter 16 of the IBC or Section R301.2.1.1 of the IRC, as applicable, must not exceed the allowable wind pressures described in Section 4.2.2 or 4.2.3, as applicable. Wind resistance of soffit panels is outside the scope of this report except where specifically listed in Table 4 and where installation is as siding.

4.2.2 IBC: For buildings constructed under the requirements of the IBC, vinyl siding must be installed as described in 2015, 2012, and 2009 IBC Section 1405.14 (2006 IBC Section 1405.13) and Section 4.1 of this report, over sheathings or materials addressed in IBC Section 2304.6 that are capable of independently resisting both positive and negative wind pressures occurring under design conditions at the building location. The allowable negative wind loads for the vinyl siding are as shown in Table 3; the sheathing must be capable of withstanding the indicated negative load, or greater. Positive wind pressures are not considered for the siding, since the sheathing must be capable of supporting the imposed loads, including but not limited to, positive and negative transverse wind pressures.

4.2.3 IRC: The siding must be installed as described in Section 4.1, and either Section 4.2.3.1 or 4.2.3.2.

4.2.3.1 Installation over Sheathings Other Than Foam Plastics:

4.2.3.1.1 For the 2015 IRC, when installed over sheathing other than foam plastics sheathing, in applications where the building's mean roof height and ultimate wind speed [Figure R301.2(4)A] are in accordance with Table R703.3.1, sheathing must be as required by Table R703.3(1) of the IRC. Should any of these conditions not be met, installation must be in accordance Section 4.2.3.1.3 of this report.

4.2.3.1.2 For the 2012, 2009 and 2006 IRC, when installed over sheathings other than foam plastic sheathing, where the building height is 30 feet (9.1 m) or less and the basic wind speed [Figure R301.2(4)A] is less than 110 mph (49 m/s) in Exposure B, 90 mph (40 m/s) or less in Exposure C or 85 mph (37 m/s) or less in Exposure D, sheathing (other than foam plastic) must comply with Table R703.4. Should any of these conditions not be met, installation must be in accordance Section 4.2.3.1.3 of this report.

4.2.3.1.3 Vinyl siding must be installed over sheathing as required by Table R703.3(1) of the 2015 IRC, or Table R703.4 of the 2012, 2009 and 2006 IRC that is capable of independently resisting both positive and negative wind pressures occurring under design conditions at the building location. The allowable negative wind loads for the vinyl siding are as shown in Table 3; the sheathing must be capable of withstanding the indicated negative load, or greater. Positive wind pressures are not considered for the siding, since the sheathing must be capable of supporting the imposed loads, including but not limited to, positive and negative transverse wind pressures.

4.2.3.2 Installation over Foam Plastic Sheathing: When installed over foam plastic sheathing, siding profiles must be installed in accordance with Section R704.11.2 of the 2015, 2012, and 2009 IRC.

5.0 CONDITIONS OF USE:

The Alside Premium Vinyl Wall Sidings described in this report comply with those codes specifically listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation complies with this report, the manufacturer's published installation instructions and the applicable code. If there is a conflict between the installation instructions and this report, this report shall govern.

5.2 Alside Premium Vinyl Wall Sidings are limited to installation on buildings of Type V (IBC) construction, and to construction permitted by the IRC.

5.3 The exterior walls must be braced or sheathed to resist racking loads with approved materials in accordance with the requirements of the applicable code.

5.4 The siding must be installed only on exterior walls covered by solid sheathing capable of resisting design wind pressures both positive and negative. The sheathing must be covered with a water-resistive barrier, as required by the applicable code.

5.5 The siding is manufactured in Ennis, Texas and Burlington, Ontario, Canada, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Manufacturer's published installation instructions.

6.2 Data in accordance with the ICC-ES Acceptance Criteria for Vinyl Sidings (AC37), dated February 2014, (editorially revised July 2015).

6.3 Reports of tests in accordance with ASTM D5206.

7.0 IDENTIFICATION

7.1 The Alside Premium Vinyl Wall Sidings described in this report are identified by a stamp bearing the Alside or AMI (Associated Materials, Inc.) name and/or trademark, the product type, the statement "Conforms to ASTM Specification D3679" and the evaluation report number (ESR-1258).

7.2 The report holder's contact information is the following:

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TABLE 1—SIDING DESCRIPTIONS

SIDE PREMIUM VINYL WALL SIDING				
Product Name	**Product Description**	**Exposure**	**Thickness**	**Length**
BOARD & BATTEN®				
7" Vertical Board & Batten	Vertical 5 1/2" Board & 1 1/2" Batten	7 in. (178 mm)	0.048 in. (1.27 mm)	10 ft. - 0 in. (3048 mm)
CHARTER OAK® SERIES				
Charter Oak®	Horizontal Double 4 1/2" Clapboard Siding	9 in. (229 mm)	0.046 in. (1.17 mm)	12 ft. - 1 in. (3683 mm)
Charter Oak® XL	Horizontal Double 4 1/2" Clapboard Siding			16 ft. - 8 in. (5080 mm)
Charter Oak® XXL	Horizontal Double 4 1/2" Clapboard Siding			25 ft. - 0 in. (7620 mm)
Charter Oak® XL Matte	Horizontal Double 4 1/2" Clapboard Siding			16 ft. - 8 in. (5080 mm)
Charter Oak®	Horizontal Double 4 1/2" Dutch Lap Siding	9 in. (229 mm)	0.046 in. (1.17 mm)	12 ft. - 1 in. (3683 mm)
Charter Oak® XL	Horizontal Double 4 1/2" Dutch Lap Siding			16 ft. - 8 in. (5080 mm)
Charter Oak® XXL	Horizontal Double 4 1/2" Dutch Lap Siding			25 ft. - 0 in. (7620 mm)
CONQUEST® SERIES				
Conquest®	Horizontal Double 4 1/2" Clapboard Siding	9 in. (229 mm)	0.040 in. (1.02 mm)	12 ft. - 1 in. (3683 mm)
Conquest®	Horizontal Double 4 1/2" Dutch Lap Siding			
HISTORICAL COLLECTION				
Williamsport® Colonial	Horizontal 6 1/2" Beaded Clapboard Siding	6 1/2 in. (165 mm)	0.044 in. (1.12 mm)	12 ft. - 4 in. (3759 mm)
ODYSSEY® PLUS SERIES				
Odyssey®	Horizontal Double 4" Clapboard Siding	8 in. (203 mm)	0.044 in. (1.12 mm)	12 ft. - 6 in. (3810 mm)
Odyssey®	Horizontal Double 4" Dutch Lap Siding			
Odyssey®	Horizontal Double 5" Clapboard Siding	10 in. (254 mm)	0.044 in. (1.12 mm)	12 ft. - 0 in. (3658 mm)
Odyssey®	Horizontal Double 5" Dutch Lap Siding			
PRESERVATION SERIES				
Preservation	Horizontal Double 4 1/2" Clapboard Siding	9 in. (229 mm)	0.050 in. (1.27 mm)	12 ft. - 1 in. (3683 mm)
Preservation XL	Horizontal Double 4 1/2" Clapboard Siding			16 ft. - 8 in. (5080 mm)
Preservation	Horizontal Double 4 1/2" Dutch Lap Siding	9 in. (229 mm)	0.050 in. (1.27 mm)	12 ft. - 1 in. (3683 mm)
Preservation XL	Horizontal Double 4 1/2" Dutch Lap Siding			16 ft. - 8 in. (5080 mm)
COVENTRY SERIES				
Coventry	Horizontal Double 4" Clapboard Siding	8 in. (203 mm)	0.042 in. (1.07 mm)	12 ft. - 6 in. (3810 mm)
Coventry	Horizontal Double 4" Dutch Lap Siding			
Coventry	Horizontal Double 5" Clapboard Siding	10 in. (254 mm)	0.042 in. (1.07 mm)	12 ft. - 0 in. (3658 mm)
Coventry	Horizontal Double 5" Dutch Lap Siding			
Coventry	Horizontal Triple 3" Siding	9 in. (229 mm)	0.042 in. (1.07 mm)	12 ft. - 1 in. (3683 mm)

TABLE 2—SOFFIT DESCRIPTIONS[1]

PRODUCT NAME	PRODUCT DESCRIPTION	EXPOSURE	THICKNESS	LENGTH
Alliance™ T4 Premium Vinyl Soffit	V-Grooved Premium Soffit, Aerated and Solid	12 in. (305 mm)	0.040 in. (1.02 mm)	12 ft. - 6 in. (3810 mm)
Charter Oak® Soffit	V-Grooved Reinforced Lock Soffit, Aerated and Solid	10 in. (254 mm)	0.042 in. (1.07 mm)	12 ft. - 0 in. (3658 mm)
Super Span™ Heavy Gauge Premium Soffit	V-Grooved Super Span Soffit, Aerated and Solid	10 in. (254 mm)	0.044 in. (1.12 mm)	12 ft. - 0 in. (3658 mm)
D5 Economy Soffit	V-Grooved Soffit, Aerated and Solid	10 in. (254 mm)	0.042 in. (1.07mm)	12 ft. - 0 in. (3658 mm)

[1]The windload resistance of the soffits is outside the scope of this report, except for the specific soffits listed in Table 4 of this report, where the soffits are installed as siding.

TABLE 3—DESIGN WIND PRESSURES (lbf/ft²): ALSIDE PREMIUM WALL SIDING

PRODUCT NAME	Nails[1] (inches)				Staples[2] (inches)			
	8[3]	12[3]	16[4]	24[4]	8[3]	12[3]	16[4]	18[4]
BOARD & BATTEN®								
7" Vertical Board & Batten	50		—	—	—	—	—	—
CHARTER OAK® SERIES								
Charter Oak® Double 4 1/2" Clapboard	160	123	104	61	276	184	138	123
Charter Oak® XL Double 4 1/2" Clapboard								
Charter Oak® XXL Double 4 1/2" Clapboard								
Charter Oak® XL Matte Double 4 1/2" Clapboard								
Charter Oak® Double 4 1/2" Dutch Lap	169	120	96	60	236	157	118	105
Charter Oak® XL Double 4 1/2" Dutch Lap								
Charter Oak® XXL Double 4 1/2" Dutch Lap								
CONQUEST® SERIES								
Conquest® Double 4 1/2" Clapboard	64	42	31	21	98	65	49	43
Conquest® Double 4 1/2" Dutch Lap	93	56	38	28	147	98	73	65
HISTORICAL COLLECTION								
Williamsport® Colonial Beaded Clapboard	41.3			—	—	—	—	—
ODYSSEY® PLUS SERIES								
Odyssey® Double 4 Clapboard	85	56	42	28	93	62	47	41
Odyssey® Dutch Lap 4	111	65	42	33	200	133	100	89
Odyssey® Double 5 Clapboard	73	50	38	25	75	50	38	25
Odyssey® Dutch Lap 5	84	50	33	25	85	56	42	28
PRESERVATION SERIES								
Preservation Double 4 1/2 Clapboard	147	98	73	49	266	177	133	118
Preservation Double 4 1/2 Dutch Lap	169	112	84	56	248	165	124	110
COVENTRY SERIES								
Coventry Horizontal Double 4" Clapboard Siding	74			—	—	—	—	—
Coventry Horizontal Double 4" Dutch Lap Siding	49			—	—	—	—	—
Coventry Horizontal Double 5" Clapboard Siding	62			—	—	—	—	—
Coventry Horizontal Double 5" Dutch Lap Siding	49			—	—	—	—	—
Coventry Horizontal Triple 3" Siding	39			—	—	—	—	—

For SI: 1 inch = 25.4 mm; 1 lbf/ft2 = 0.0479 kPa.

[1]Roofing nails shall be a minimum of 1 1/2 inches (38 mm) long with 1/8-inch-diameter (3.2 mm) shanks and 3/8-inch-diameter (9.5 mm) heads.
[2]Staples shall be a minimum of 1 1/2 inches (38 mm) long and 0.057 inch (1.44 mm) in diameter.
[3]Values based on minimum 1/2-inch-thick (12.7 mm) plywood sheathing attached to 2-by-4 wood studs spaced a maximum of 16 inches (406 mm) on center.
[4]Fasteners shall penetrate the sheathing into the stud.

TABLE 4—DESIGN WIND PRESSURES (lbf/ft²): ALSIDE PREMIUM VINYL SOFFIT INSTALLED AS SIDING

Product Name	Load (Nail Spacing[1])
Charter Oak® Triple 3 Soffit	40 (@ 16 in. o.c.)[3]
Economy® Double 5 Solid	111 (@ 6 in. o.c.)[2]
Alliance™ T4 Triple 4 Soffit (Solid)	62 (@ 6 in. o.c.)[2]
Super Span™ Double 5 Soffit (Solid)	67 (@ 10 in. o.c.)[4]

For SI: 1 inch = 25.4 mm, 1 lbf/ft2 = 0.0479 kPa.

[1]Roofing nails shall be a minimum of 1 1/2 inches long (38 mm) with a 1/8-inch-diameter (3.2 mm) shanks and 3/8-inch-diameter (9.5 mm) heads.
[2]Based on attachment to furring strips spaced at 18 inches (457 mm) on center.
[3]Fasteners shall penetrate the sheathing into the stud.
[4]Based on attachment to furring strips spaced at 10 inches (254) on center.