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DIVISION: 07 00 00 – THERMAL AND MOISTURE
Section: 07 46 00 –Siding

REPORT HOLDER:

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REPORT SUBJECT:

Associated Materials Composite Cladding

- **ASCEND® 7" Plank**
- **ASCEND® 12" Board and Batten**
- **ASCEND® 5" Plank**

Also known as ALIGN Composite Cladding. All references to ASCEND in this report apply equally to the ALIGN Composite Cladding products.

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2024, 2021 and 2018 *International Building Code®* (IBC)
- 2024, 2021 and 2018 *International Residential Code®* (IRC)
- 2023 and 2020 *Florida Building Code* (see section 9)
Excluding High Velocity Hurricane Zones.

NOTE: this report references the most recent version of the codes cited. Section numbers in earlier versions of the codes may differ.

1.2 *ASCEND Composite Cladding* has been evaluated for the following properties:

- Durability
- Surface Burning
- Weather Resistance

- Wind Load Resistance (Negative Transverse)
- Thermal Performance
- Termite Resistance

1.3 *ASCEND Composite Cladding* products have been evaluated for the following uses

- Use as an exterior wall cladding on buildings of Type V construction (IBC, FBC-B) and all construction types permitted under the IRC and FBC-R including installation on fire-resistance rated wall assemblies.
- Use as an exterior wall cladding on buildings of Types I-IV construction (IBC 1405.1.1, FBC 1406.2.1)

2.0 STATEMENT OF COMPLIANCE

ASCEND Composite Cladding products complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

2.1 2024 IBC and IRC Evaluation Reports: The Intertek CCRR is an *Evaluation Report* for approval of an alternate material, design, or method of construction in accordance with Section 104.2.3.6.1 of the 2024 IBC and Section R104.2.2.6.1 of the 2024 IRC.

3.0 DESCRIPTION

3.1 *ASCEND Composite Cladding* products are coextruded with a weather resistant cap stock. GPS foam insulation is adhered to the back side of the panel for rigidity and insulating properties.

3.1.1 *ASCEND 7" Plank* is a composite cladding with GPS foam backing. Panels have a 7" wide exposed face, embossed with a wood grain or matte design, and manufactured in multiple colors.

3.1.2 *ASCEND 12" Board and Batten* is a composite cladding with GPS foam backing. Panels have a 12" wide exposed



face, embossed with a wood grain or matte design, and manufactured in multiple colors.

3.1.3 ASCEND 5" Plank is a composite cladding with GPS foam backing. Panels have a 5" wide exposed face, embossed with a wood grain design, and manufactured in multiple colors.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Durability: *ASCEND Cladding* products have been evaluated for durability including weathering and freeze-thaw resistance in accordance with ICC-ES AC92.

4.2 Surface Burning: *ASCEND Cladding* products have a flame spread index not exceeding 25 and a smoke developed index not exceeding 450 when tested in accordance with ASTM E84.

4.3 Wind Load Resistance: Maximum allowable negative design pressures are shown in Table 1 for *ASCEND 7" Plank*, Table 2 for the *ASCEND 12" Board and Batten*, and Table 3 for *ASCEND 5" Plank* installed in accordance with this report.

4.3.1 *ASCEND Composite Cladding* products have not been evaluated for resisting positive wind pressure and shall be installed over code compliant sheathing materials designed and approved for the required positive design wind pressure.

4.4 Thermal Performance:

4.4.1 *ASCEND 7" Plank* composite cladding has an R-value of 2.0 when tested in accordance with ASTM C1363.

4.4.2 *ASCEND 12" Board and Batten* composite cladding has an R-value of 1.6 when tested in accordance with ASTM C1363.

4.4.3 *ASCEND 5" Plank* composite cladding has an R-value of 2.0 when tested in accordance with ASTM C1363.

4.5 Fire resistance - *ASCEND Composite Cladding* installed on the exterior of fire-resistance rated walls does not reduce the fire-resistance rating of the wall assembly established in accordance with IBC Section 703.2

4.6 Ignition resistance / IBC Section 1405.1.1.1 - *ASCEND Composite Cladding* did not exhibit sustained flaming when tested in accordance with NFPA 268.

4.7 Termite Resistance:

4.7.1 *ASCEND Composite Cladding* products are equivalent to preservative treated or naturally durable wood based on testing in accordance with AWP A E1-15. (Not applicable to ALIGN products.)

4.7.2 *ALIGN Composite Cladding* has not been evaluated for termite resistance.

5.0 INSTALLATION

5.1 General:

ASCEND Composite Cladding products must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 Application:

ASCEND Composite Cladding products shall be installed over an approved water-restive barrier in accordance with Section 1403.2 [FBC 1404.2] of the IBC and Section R703.2 of the IRC and an approved structural wood sheathing complying with Section 2303.1.5 of the IBC and FBC. See Table 1a and Table 1b for attachment.

For installation on non-combustible walls, siding is attached to dimensional 2x wood furring strips using the same fastener size and spacing identified in Tables 1 and 2 for conventional wood construction. Furring strips are considered part of the supporting wall construction and are not within the scope of this evaluation. Attachments of furring strips to supporting wall must be designed by others in accordance with local building codes.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.



6.2 When installed on exterior walls of Types I-IV construction, the following conditions of use apply in accordance with IBC Section 1405.1.1:

- The area of the siding shall not exceed 10 percent of the wall area where the fire separation distance is 5 feet or less.
- Installation shall not exceed 40 feet above grade
- Cladding located along the top of exterior walls shall be completely backed by the exterior wall and shall not extend over or above the top of the exterior wall.
- Fireblocking complying with IBC Section 718.2.6 shall be installed.

6.3 *ASCEND Composite Cladding* products installed in accordance with this report have been evaluated as an alternative to plastic siding specified in IBC Sections 1404.15 and 1404.18.

6.4 Wind design pressure determined from allowable stress (nominal) design wind speeds (V_{asd}) in accordance with IBC 1609.3.1 and IRC Section R301.2.1.3 shall not exceed the allowable wind loads specified in Table 2 for *ASCEND 7" Plank*, Table 3 for *ASCEND 12" Board and Batten*, and Table 4 for *ASCEND 5" Plank*.

6.5 Exterior walls must be braced or sheathed to resist racking loads with approved material in accordance with the applicable code.

6.6 *ASCEND Composite Cladding* products are manufactured under a quality control program with inspections by Intertek Testing Services, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Manufacturer's drawings and installation instruction *ASCEND Composite Cladding System Installation Guide* ©Alside May, 2024.

7.2 Reports of tests as follows:

- Thermal expansion per ASTM D696-16,
- Thermal and moisture linear expansion per ASTM D1042-12,
- Surface distortion per ASTM D3679-21,
- Adhesive testing per ASTM D7793-20,
- Thermal performance per ASTM C1363-11,
- Rate of burn per ASTM D635-18,
- Surface burning per ASTM E84-21a,

- Ignition temperature per ASTM D1929-20,
- Impact resistance per ASTM D4226-16,
- Wind load resistance per ASTM D5206-13,
- Weathering and freeze-thaw durability per ICC-ES AC 92 (May 2024),
- Ignitability of Exterior Wall Assemblies Using a Radiant heat Energy Source per NFPA 268-2022,
- Termite Resistance per LSU Ag Center Wood Durability Laboratory report.

7.3 Quality control documentation.

8.0 IDENTIFICATION

ASCEND Composite Cladding products are identified with the manufacturer's name (Associated Materials LLC), address and telephone number, the product name (*ASCEND 7" Plank* or *ASCEND 12" Board and Batten*), the Intertek Mark as shown, and the Code Compliance Research Report number (CCRR-0316).



9.0 FLORIDA BUILDING CODE

9.1 Scope of Evaluation:

The *ASCEND* composite cladding products described in Sections 2.0 through 7.0 of this Research Report, complies with the 2023 and 2020 *FLORIDA BUILDING CODE* – Building and Residential, subject to the following conditions:

- Compliance with the High-Velocity Hurricane Zone (HVHZ) provisions of the 2023 and 2020 *Florida Building Code* has not been evaluated and is outside the scope of this Research Report.

Intertek is an approved *evaluation entity* and *quality assurance entity* pursuant to Florida Statute 553.842 – *Product Evaluation and Approval*.



**10.0 CODE COMPLIANCE RESEARCH REPORT USE**

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

TABLE 1 – PROPERTIES EVALUATED

Property	APPLICABLE CODE SECTIONS ¹			
	IBC	IRC	FBC	FBC-R
Exterior Wall Performance Requirements	1402	R703.1	1403	R703.1
Materials	1403 104.2.3	R104.2.2	104.11	R104.11
Combustible Exterior Wall Coverings for use in Types I-IV Construction	1405.1	n/a	1406.1	n/a
Wind Load Resistance	1609	R703.1.2	1609	R703.1.2

¹Section numbers pertain to the most recent edition cited in Section 1.1 of this report.

TABLE 2 - ASCEND 7 " PLANK MAXIMUM ALLOWABLE DESIGN WIND PRESSURE^{1, 2}

Assembly Description <i>ASCEND 7 " Plank Composite Cladding</i>	Minimum Penetration into Wood Stud or Furring	Maximum Stud/Furring Spacing	ASCE 7-16 or ASCE 7-22 ASD Design Pressure (psf) ^(1,2)
0.134" shank diameter, 7/16" head, 1-1/2" roofing nail into 2x4 SPF Wood Stud ⁽³⁾	0.9"	24"	-46
16 Gauge, 7/16" Crown, 1-1/2" Staple into 2x4 SPF Wood Stud ⁽³⁾	0.9"	24"	-26

⁽¹⁾ Allowable loads are applicable to wind design pressure derived from allowable stress design (aka. Nominal) wind speed (V_{asd}) per IBC Section 1609.3.1.

⁽²⁾ Maximum allowable design pressure includes a pressure equalization factor (PEF) of 0.5.

⁽³⁾ SPF or wood with specific gravity, $G=0.42$ or greater.



TABLE 3 - ASCEND 12" BOARD AND BATTEN MAXIMUM ALLOWABLE DESIGN WIND PRESSURE^{1, 2}

Assembly Description <i>ASCEND 12" Board and Batten Composite Cladding</i> Installed on walls of 7/16" OSB sheathing	Maximum Fastener Spacing	Maximum Stud/Furring Spacing	ASCE 7-16 or ASCE 7-22 ASD Design Pressure (psf) ^(1,2)
1/8" smooth shank roofing nails, 3/8" head, 1-1/2" long, spaced 12" on center through nail fin into 7/16" OSB sheathing	12"	16"	-50
1/8" smooth shank roofing nails, 3/8" head, 1-1/2" long, spaced 8" on center through nail fin into 7/16" OSB sheathing.	8"	16"	-61
16-gauge, 7/16" crown, 1-1/2" long staples, spaced 12" on center, through the nail fin into 7/16" OSB sheathing.	12"	16"	-61
16-gauge, 7/16" crown, 1-1/2" long staples, spaced 8" on center, through the nail fin into 7/16" OSB sheathing.	8"	16"	-65
#8 x 1-1/2" self-drilling pan head screws, Spaced 12" on center, through the nail fin into 7/16" OSB sheathing.	12"	16"	-53

⁽¹⁾ Allowable loads are applicable to wind design pressure derived from allowable stress design (aka. Nominal) wind speed (V_{asd}) per IBC Section 1609.3.1.

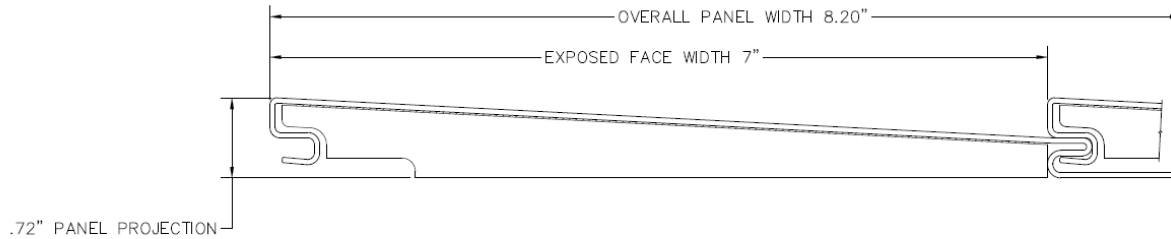
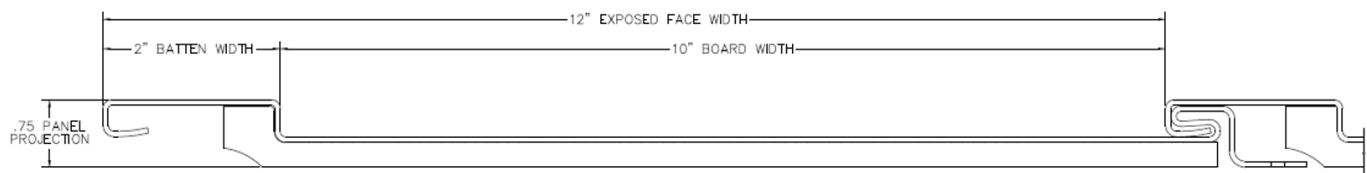
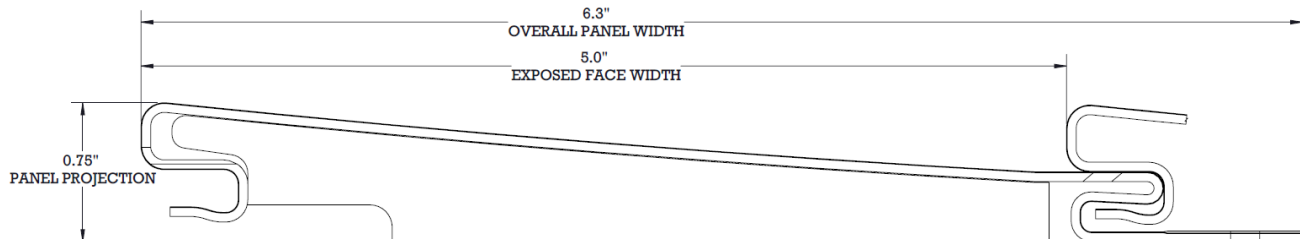
⁽²⁾ Maximum allowable design pressure includes a pressure equalization factor (PEF) of 0.5 and a Safety Factor of 1.5.

Table 4 – ASCEND 5" Plank Maximum Allowable Design Wind Pressure^{1,2}

Assembly Description <i>ASCEND 5" Plank Composite Cladding</i> Installed on walls of 7/16" OSB Sheathing	Maximum Fastener Spacing	Maximum Stud/Furring Spacing	ASCE 7-16 or ASCE 7-22 ASD Design Pressure (psf)
5/32" ring shank roofing nails, 7/16" head, 1-1/2" long, spaced 24" on center through nail fin and OSB sheathing into studs	24"	24"	-124
16-gauge, 7/16" crown, 1-1/2" long staples, spaced 24" on center through nail fin and OSB sheathing into studs	24"	24"	-33

⁽¹⁾ Allowable loads are applicable to wind design pressure derived from allowable stress design (aka. Nominal) wind speed (V_{asd}) per IBC Section 1609.3.1.

⁽²⁾ Maximum allowable design pressure includes a pressure equalization factor (PEF) of 0.5 and a Safety Factor of 1.5.

**FIGURE 1 – ASCEND 7" Plank Composite Cladding Profile****FIGURE 2 – ASCEND 12" Board & Batten Composite Cladding Profile****FIGURE 3 – ASCEND 5" Plank Composite Cladding Profile**

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