Code Compliance Research Report
CCRR-0316

Issue Date: 10-09-2019
Revision Date: 10-30-2023
Renewal Date: 10-31-2024

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

REPORT HOLDER:
Associated Materials Inc.
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REPORT SUBJECT:
ASCEND™ Composite Cladding

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2021 and 2018 *International Building Code®* (IBC)
- 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 number 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* has 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 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.

3.0 DESCRIPTION

3.1 *ASCEND™ Composite Cladding* is a composite cladding with GPS foam backing. Panels have a 7" wide exposed face, embossed with a wood grain design and manufactured in multiple colors.

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

4.0 PERFORMANCE CHARACTERISTICS

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

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

4.3 Windload Resistance: Maximum allowable negative design pressures are shown in Table 1 for ASCEND™ Composite Cladding 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: *ASCEND Composite Cladding* have an R value of 2.0 when tested in accordance with ASTM C1363-11.

4.5 *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: *ASCEND Composite Cladding* is equivalent to preservative treated or naturally durable wood based on testing in accordance with AWPA E1-15.

5.0 INSTALLATION

5.1 General:

ASCEND™ Composite Cladding 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 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 1 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 Table 1 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* installed in accordance with this report shall be permitted as a direct substitute for Vinyl Siding and Polypropylene siding under the conditions specified in IBC Sections 1404.14 [FBC 1405.14] and 1404.18 [FBC 1405.18] respectively.

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 1.

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* is 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 Installation Guidelines* dated 10/01/2019.

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 D3679-17,
- Adhesive testing per ASTM D7793-17,
- Thermal performance per ASTM C1363-11,
- Rate of burn per ASTM D635-18,
- Surface burning per ASTM E84-09,
- Ignition temperature per ASTM D1929-16,
- Impact resistance per ASTM D4226-16,
- Wind load resistance per ASTM D5206-13,
- Weathering and freeze-thaw durability per ICC-ES AC 92 (March 2016),
- Ignitability of Exterior Wall Assemblies Using a Radiant heat Energy Source per NFPA 268-2017,
- Termite Resistance per LSU Ag Center Wood Durability Laboratory report.

7.3 Quality control documentation.

8.0 IDENTIFICATION

ASCEND™ Composite Cladding is identified with the manufacturer's name (Associated Materials), address and telephone number, the product name (*ASCEND™ Composite Cladding)*, the Intertek Mark as shown below, and the Code Compliance Research Report number (CCRR-0316).

9.0 FLORIDA BUILDING CODE

9.1 Scope of Evaluation:

The *ASCEND™ Composite Cladding* 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 e*valuation 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 - MAXIMUM ALLOWABLE DESIGN WIND PRESSURE[1, 2]

Assembly Description	Minimum Penetration into Wood Stud or Furring	Maximum Stud/Furring Spacing	ASCE 7-10 or 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"	-53
16 Gauge, 7/16" Crown, 1-1/2" Staple into 2x4 SPF Wood Stud[(3)]	0.9"	24"	-32

(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.

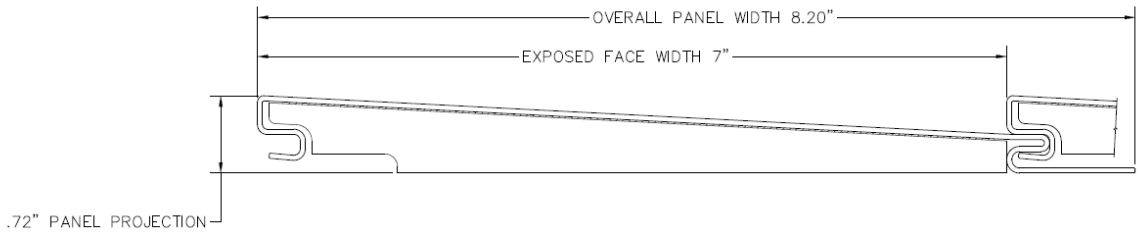

FIGURE 1 – ASCEND™ Composite Cladding Profile