

ICC-ES Evaluation Report


ESR-4085

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<p>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</p> <p>Section: 07 46 16— Aluminum Siding</p>	<p>REPORT HOLDER:</p> <p>PLY GEM RESIDENTIAL SOLUTIONS - A DIVISION OF CORNERSTONE BUILDING BRANDS</p>	<p>EVALUATION SUBJECT:</p> <p>ENVOY ALUMINUM SIDING AND ENDURANCE ALUMINUM SIDING</p>	
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1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2018, 2015 and 2012 [International Building Code® \(IBC\)](#)
- 2018, 2015 and 2012 [International Residential Code® \(IRC\)](#)

Properties evaluated:

- Transverse wind load
- Surface-burning characteristics

1.2 Evaluation to the following green codes and/or standards:

- 2022 [California Green Building Standards Code \(CALGreen\)](#), Title 24, Part 11
- 2020, 2015, 2012 and 2008 ICC 700 [National Green Building Standard™](#) (ICC 700-2020, ICC 700-2015, ICC 700-2012, and ICC 700-2008)

Attributes verified:

- See Section 3.0

2.0 USES

Envoy and Endurance Aluminum Siding is used as an exterior veneer on combustible or noncombustible construction.

3.0 DESCRIPTION

Envoy Aluminum Siding is available in three profiles: Rustic Double 4", which has a length of 12 feet 6 inches (3.81 m); Horizon Collection Double 5", which has a length of 12 feet (3.66 m); and 8" Smooth, which has a length of 12 feet 6 inches (3.81 m). The Envoy Aluminum Siding is fabricated from 0.024 inch (0.61 mm) thick 3105 aluminum and has an Alupalure 2000 coating.

Endurance Aluminum Siding is available in three profiles: Rustic Double 4", which has a length of 12 feet 6 inches (3.81 m); Dutch Oak Double 5" Dutch Lap, which has a length of 12 feet (3.66 m); and 8" Smooth, which has a length of 12 feet 6 inches (3.81 m). The Endurance Aluminum Siding is fabricated from 0.019 inch (0.48 mm) thick 3105 aluminum and has an Alupalure 2000 coating.

The aluminum siding with Alupalure 2000 finish has a flame spread index of less than 25 and a smoke-developed index of less than 450 when tested in accordance with ASTM E84.

The attributes of the aluminum siding have been verified as conforming to the provisions of (i) CALGreen Sections A4.405.1.3 (prefinished materials) and A5.406.1.2 (reduced maintenance); (ii) ICC 700-2020 Section 601.7 and 11.601.7 and ICC 700-2015 and ICC 700-2012 Sections 601.7, 11.601.7, and 12.1(A).601.7 (site-applied finishing materials); and (iii) ICC 700-2008 Section 601.7 (site-applied finishing materials). Note that decisions on compliance for those areas rest with the user of this report. 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. The code may provide supplemental information as guidance.

4.0 DESIGN AND INSTALLATION

4.1 General:

Installation of the siding must comply with the prescriptive requirements of Section 1404.11 of the 2018 IBC (Section 1405.11 of the 2015 and 2012 IBC); or Section R703.3 and Table R703.3(1) of the 2018 and 2015 IRC (Section R703.4 and Table R703.4); the manufacturer's published installation instructions; and this report. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

4.2 Wind Resistance:

Envoy and Endurance Aluminum Siding must be backed by a substrate capable of withstanding the imposed positive and negative design wind loads. The substrate must be covered with an approved water-resistive barrier where required by the code. The siding is attached using 1½ inch (38 mm) long-by- 0.120 inch (3.05 mm) diameter shank aluminum or corrosion-resistant steel nails (not stainless steel nails) through the sheathing into the studs at a spacing of 16 inches (406 mm) on center. The studs must have a minimum specific gravity of 0.50. The allowable negative wind load on the Envoy and Endurance Aluminum Siding is 23.5 psf (1125 Pa).

5.0 CONDITIONS OF USE:

The Envoy and Endurance Aluminum Siding 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, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, the most stringent governs.
- 5.2 The Envoy and Endurance Aluminum Siding must be backed by a solid substrate. When that substrate is wood sheathing, it must be no less than 5/8 inch (15.9 mm) thick plywood.
- 5.3 A water-resistive barrier must be provided as required by the applicable code.
- 5.4 The aluminum siding is installed in areas where the ultimate wind speed is 130 miles per hour (209 km/hr) or less, and the building height is less than 40 feet (12.2 m).
- 5.5 The substrate and framing to which the Envoy and Endurance Aluminum Siding is attached must be designed for the applicable positive and negative wind loads. Design of the substrate and framing is outside the scope of this report.

6.0 EVIDENCE SUBMITTED

- 6.1 Manufacturer's descriptive literature and installation instructions.
- 6.2 Documentation in accordance with American Architectural Manufacturers' Association Standard Specifications for Aluminum Siding, Soffit and Fascia (AAMA 1402).
- 6.3 Data in accordance with ASTM E84.
- 6.4 Quality documentation in accordance with [ICC-ES Acceptance Criteria for Quality Documentation \(AC10\)](#).

7.0 IDENTIFICATION

- 7.1 Each panel is marked with the report holder's name, the product name, and the evaluation report number (ESR-4085).
- 7.2 The report holder's contact information is the following:

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