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ICC-ES Listing Report ESL-1320

Reissued March 2024

This listing is subject to renewal March 2025.

CSI: DIVISION: 07 00 00 — THERMAL AND MOISTURE PROTECTION
Section: 07 41 13 — Metal Roof Panels

Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

Product: PETERSEN STANDING SEAM METAL ROOF PANELS: SNAP-CLAD, TITE-LOC PLUS AND PAC-150 180° DOUBLE LOCK

Listee: PETERSEN ALUMINUM A DIVISION OF CARLISLE ARCHITECTURAL METALS

Evaluation: Petersen Standing Seam Metal Roof Panels are available in preformed standing seam profiles produced from steel, aluminum, and copper sheet.

Materials used in panel fabrication conform to the following specifications: Aluminum: ASTM B209; minimum 0.032 inch thick (0.81 mm); F_y = minimum 21 ksi; Galvanized Steel: ASTM A653 G90; minimum 24 gauge [0.024 inch thick (0.61 mm)]; F_y = minimum 50 ksi; Galvalume® Steel: ASTM A792 AZ50; minimum 24 gauge [0.024 inch thick (0.61 mm)]; F_y = minimum 50 ksi; Copper: ASTM B370; minimum 16 oz./sq. ft. (0.0416 kg/m^2); F_y = minimum 38 ksi.

The panel profiles are as follows: Snap-Clad: Formed to 10-inch- to 18-inch-wide (254 mm to 457 mm) panels, with $1^3/_4$-inch-high (44 mm) snap locking seams; Tite-Loc: Formed to 12-inch- to 18-inch-wide (305 mm to 457 mm) panels, with 2-inch-high (51 mm) seams that are mechanically locking at 90°; Tite-Loc Plus: Formed to 12-inch- to 18-inch-wide (305 mm to 457 mm) panels, with 2-inch-high (51 mm) seams that are mechanically locking at 180°; PAC-150 180° Double Lock: Formed to 12-inch- to 20-inch-wide (305 mm to 508 mm) panels, with $1^1/_2$-inch-high (38 mm) mechanically locking seams. See Figures 1 through 4.

The panels were evaluated when tested in accordance to the following standard:

- ASTM E108 (-17, -16, -11 and -07a), Standard Test Methods for Fire Tests of Roof Coverings, ASTM International.

Findings: Petersen Standing Seam Metal Roof Panels are components of roof assemblies classified as Class A roof assemblies, when installed as specified in Table 1 and based on testing in accordance with ASTM E108, as referenced in the applicable sections of the following code editions below.

- 2021, 2018, 2015 and 2012 *International Building Code®*
  Applicable Section: 1505.1
- 2021, 2018, 2015 and 2012 *International Residential Code®*
  Applicable Section: R902.1

TABLE 1—FIRE CLASSIFICATION ASSEMBLIES

SYSTEM NO.	ROOF CLASS	SUBSTRATE[1]	MAX. ROOF SLOPE	ASSEMBLY DETAIL[2,3,4]	
1	A	Noncombustible	Unlimited	**Barrier Board:**	Georgia-Pacific DensDeck® Roofboard or United States Gypsum Corp. SECUROCK Glass-Matt Roof Board (Type SGMRX, $^1/_4$ in. thick min.
				Ply Sheet (Optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or equivalent asphalt-based, mechanically attached UL Classified Prepared Roofing Accessory.
				Panel:	Steel or Aluminum Snap-Clad, Tite-Loc, Tite-Loc Plus and PAC-150 180° Double Lock, mechanically fastened.
2	A	Noncombustible	Unlimited	**Barrier Board:**	Min. $^5/_8$-inch thick plywood.
				Ply Sheet (Optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or equivalent asphalt-based, mechanically attached UL Classified Prepared Roofing Accessory.
				Panel:	Steel Snap-Clad, Tite-Loc, Tite-Loc Plus and PAC-150 180° Double Lock, mechanically fastened.
3	A	Noncombustible	Unlimited	**Barrier Board:**	Min. $^7/_{16}$-inch oriented strand board or min. $^5/_8$-inch plywood over min. 1-inch-thick polyisocyanurate insulation board or min. 1-inch-thick Polyisocyanurate composite board.
				Ply Sheet (Optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or equivalent asphalt-based, mechanically attached UL Classified Prepared Roofing Accessory.
				Panel:	Steel or Aluminum Snap-Clad, Tite-Loc, Tite-Loc Plus and PAC-150 180° Double Lock, mechanically fastened.
4	A	Noncombustible	Unlimited	**Insulation:**	Polyisocyanurate, glass fiber, perlite or wood fiber, minimum 1-inch-thick.
				Ply Sheet (Optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or equivalent asphalt-based, mechanically attached UL Classified Prepared Roofing Accessory.
				Panel:	Steel or Aluminum Snap-Clad, Tite-Loc, Tite-Loc Plus and PAC-150 180° Double Lock, mechanically fastened.
5	A	Noncombustible	Unlimited	**Framing:**	Metal purlins
				Panel:	Steel Snap-Clad, Tite-Loc, Tite-Loc Plus and PAC-150 180° Double Lock, mechanically fastened.
6	A	Combustible	Unlimited	**[5]Barrier Board:**	Georgia-Pacific DensDeck® Roofboard[4] or United States Gypsum Corp. SECUROCK Glass-Matt Roof Board (Type SGMRX)G-P Products "DensDeck®", $^1/_4$ in. thick min. with all joints staggered a minimum of 6 inches from the plywood joints.
				Ply Sheet (Optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or equivalent asphalt-based, mechanically attached UL Classified Prepared Roofing Accessory.
				Panel:	Steel or Aluminum Snap-Clad, Tite-Loc, Tite-Loc Plus and PAC-150 180° Double Lock, mechanically fastened.

For **SI:** 1 inch = 25.4 mm.

[1]Wood deck must be a minimum of $^{15}/_{32}$-inch-thick (11.9 mm) plywood or non-veneer APA-rated $^7/_{16}$-inch-thick (11.1 mm) oriented-strand board (OSB). Steel deck must be a minimum of No. 22 gauge galvanized steel [0.030 inch (0.76 mm)].

[2]All foam plastic insulation must be UL-classified foam plastic for roofing systems, and must be limited to the minimum thickness noted and the maximum thickness for which the flame spread index (in accordance with ASTM E84 or UL 723) is 75 or less. Polyisocyanurate foam plastic insulation must comply with ASTM C1289 and wood fiber board must comply with ASTM C208.

[3]Barrier or cover boards, ply sheets, underlayments, and panels must be UL-classified for roofing systems.

[4]The optional ply sheet may be any roofing underlayment recognized for use with classified roof coverings in a current ICC-ES evaluation report as complying with the ICC-ES Acceptance Criteria for Roof Underlayments (AC188).

[5]For System No. 6, one or more layers of GAF "VersaShield® Fire Resistant Roof Deck Protection" or "VersaShield™ Underlayment" (ESR-2053), mechanically attached or loose laid, may be used in lieu of barrier board when installed directly underneath the metal panels.

Identification:

1. The panels are identified with a label bearing the manufacturer's name (Petersen Aluminum) and address, the product name, the material type, the ICC-ES evaluation report number (ESR-4173) and/or ICC-ES listing number (ESL-1320), and when applicable, the ICC-ES listing mark.

2. The report holder's contact information is the following:

   PETERSEN ALUMINUM A DIVISION OF CARLISLE ARCHITECTURAL METALS
   1005 TONNE ROAD
   ELK GROVE VILLAGE, ILLINOIS 60007
   (847) 956-7968
   www.pac-clad.com

Installation: The product must be installed in accordance with Petersen Aluminum's published installation instructions and applicable codes.

Conditions of Listing:

1. The listing report addresses only conformance with the standard and code sections noted above.

2. Approval of the product's use is the sole responsibility of the local code official.

3. The listing report applies only to the materials tested and as submitted for review by ICC-ES.

4. The panels are manufactured in Phoenix, Arizona and Bonney Lake, Washington, under a quality control program with inspections by ICC-ES.

FIGURE 1—SNAP-CLAD

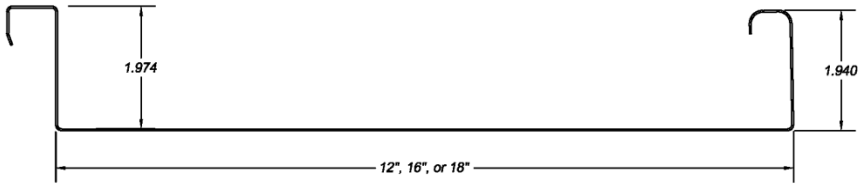

FIGURE 2—TITE-LOC

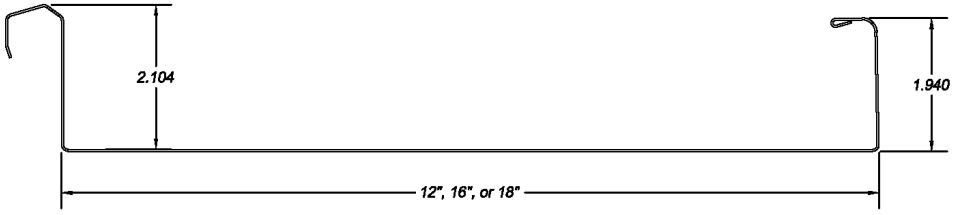

FIGURE 3—TITE-LOC PLUS

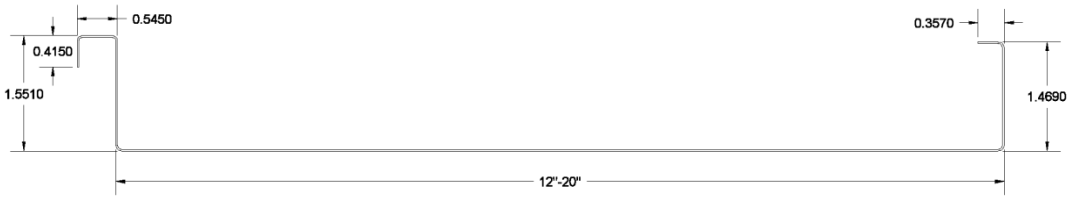

FIGURE 4—PAC-150 180° DOUBLE LOCK