

Product Evaluation

RC643 | 0121

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RC-643

Effective Date: April 1, 2021

Re-evaluation Date: January 2025

Product Name: PAC T-250 0.032" Aluminum Standing Seam Roof Panels Installed Over an Insulated Steel Deck

Manufacturer: Petersen Aluminum Corporation
1005 Tonne Road
Elk Grove Village, IL 60007
(800) 441-8661

General Description:

The PAC T-250 standing seam roof panels are 0.032" 3003-H14 aluminum roof panels that have a mechanically seamed aluminum top cap side joint. The roof panel has an effective width of 18".

Limitations:

Roof Framing: The roof panels must be installed over a minimum 22-gauge metal B-deck secured to structural steel supports spaced a maximum of 5' on center.

New Roof Framing Attachment: The roof framing must meet or exceed the uplift requirements of the IRC or IBC and must be installed as required for resistance to wind loads.

Installation over an Existing Roof Covering: Not permitted.

Design Wind Pressure: The design pressure uplift load resistance must be as specified in Table 1.

Roof Slope: The roof panels may be installed on roofs with a roof slope as low as 1/2:12 if sealant is used on the panel side laps. If sealant is not used on the panel side laps, then the minimum roof slope is 3:12.

Table 1:

Attachment of Minimum 0.032" Aluminum PAC T-250 Standing Seam Roof Panels to a Minimum 22-gauge Steel Deck

| Design Pressure (psf) | Panel Seam | Panel Clip | Clip Spacing | Clip Fastener |
|-----------------------|-----------------------------|--|--------------|---|
| -71.0 | Mechanically Seamed Top Cap | One-piece; 16-gauge steel; 6" wide; 2.44" height | 48" | Two (2) No. 14-13 DPI Concealor self-drilling fasteners with low-profile pancake head and No. 2 drive square Philips drive by Triangle Fastener Corporation |

Installation:

General: The roofing panels must be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Panels: The roof panels must be secured to the roof framing as specified in Table 1.

Deck: The roof deck must be a minimum 22-gauge metal B-deck.

Insulation: Two-layers of 2" rigid foam board insulation. Loose laid over the steel deck.

Underlayment: A minimum of one layer of Carlisle WIP 300HT self-adhered underlayment complying with ASTM D1970 applied continuously over the rigid foam board insulation without interruption.

Roof Panels to Steel Deck: The roof panels are installed over the underlayment and insulation and secured to the steel deck using the steel clips specified in Table 1. Below each clip, there is a 4" x 8" x 18-gauge galvanized steel bearing plate that the clip rests on. Each clip fastener goes through the clip, the bearing plate, and the insulation and penetrates through the steel deck. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the purlins. The female rib of the panel is engaged over the male rib and mechanically seamed with an aluminum top cap.

Trims, Closures, and Accessories: Components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim must be installed as required by the manufacturer.

Panel Ends, Panel Edges, and Panel End Laps: As required by the manufacturer.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.