

Product Evaluation

RC401 | 0319

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-401

Effective Date: March 1, 2019

Re-evaluation Date: March 2023

Product Name: PV 150 24-Gauge Steel Standing Seam Roofing Panels Installed over a Plywood Deck

Manufacturer: P.V.R. Construction, LLC
23103 Park Road
Tomball, TX 77377
(281) 808-6484

General Description: This evaluation report is for the PV 150 standing seam metal roofing panels installed over a plywood deck. The standing seam metal roof panels in the evaluation report are minimum 24-gauge steel with an optional paint finish. The metal roofing panels have a maximum coverage of 16". The metal roofing panels have a 1.5" tall mechanical double lock standing seam rib. The 24-gauge steel material is ASTM A 792 AZ-55, Grade 50, with a 50 ksi yield point with optional paint finishes. Panels must be formed with the panel rollformer specifications and tolerances. Panel rollformer by Knudson Manufacturing, Inc

Limitations:

Roof Deck: The metal roofing panels must be installed over a minimum 15/32" plywood deck.

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

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

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

Table 1. Attachment of 24-gauge PV 150 Steel Standing Seam Roofing Panels to Minimum 15/32" Plywood Deck

| Design Wind Pressure (psf) | Clip on Center Spacing | Clip Fastener |
|----------------------------|------------------------|---------------|
| -71.0 | 24" on center | (2) No. 10-12 |
| -93.5 | 18" on center | (2) No. 10-12 |
| -116.0 | 12" on center | (2) No. 10-12 |
| -138.5 | 6" on center | (2) No. 10-12 |

Installation over Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing, or roll roofing applied over an existing solid roof deck of minimum 15/32" plywood. Note: Inspection of existing roof deck must be made prior to the installation of the roofing panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before roof panel installation can begin.

Installation:

General Installation Requirements: The metal roofing panels must be installed in accordance with the manufacturer's installation instructions and this product evaluation.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt or equivalent must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed with minimum 6" side laps and 3" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instruction. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Metal Roof Panels to the Wood Deck: The panels are secured to the wood deck with a sliding clip. The clip spacing must be as specified in Table 1. Each clip is secured to the wood deck with two (2) No. 10-12 x 1" Pancake Type A screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length must be increased so that the fasteners are long enough to ensure a minimum penetration of 1/4" below the existing plywood roof decking).

Panel Clip: Two-piece sliding clip. 24-gauge x 3" long galvanized steel top. 18-gauge x 3" long galvanized steel base.

Panel Seam: The panel is seamed to a 180-degree seam (double lock) with a mechanical seamer.

Panel Ends and End Laps: The panel ends and endlaps must be secured to the wood deck as required by the manufacturer.

Panel Edges: The panel edges must be secured to the wood deck as required by the manufacturer.

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.

Alternative Fasteners: Alternative fasteners of equal or greater strength may be substituted.

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