

Product Evaluation

RC594 | 0522

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-594

Effective Date: May 2022

Re-evaluation Date: May 2026

Product Name: 26-gauge Steel PBR Roofing Panels Installed Over Wood Purlins or a Plywood Roof Deck

Manufacturer: Victoria Metal Supply
5274 State Hwy 185
Victoria, TX 77905
(361) 570-5775

General Description:

The PBR metal roofing panels are steel roofing panels. The metal roofing panels have a maximum 36" of coverage. The metal roof panels have a 1-1/4" height. The metal roofing panels are manufactured from minimum 26-gauge steel that conforms to ASTM A792, with a yield strength of 80,000 psi. The panels are available with an optional pain finish.

Limitations:

Roof Framing: The metal roofing panels may be installed over nominal 1x4 wood purlins or 15/32" plywood. The wood purlins or plywood sheathing must be attached to roof framing with a maximum spacing of 24" 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.

Design Wind Pressure: The design pressure uplift load resistance must be as specified in Table 1 and 2.

Roof Slope: The metal roofing 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, then the minimum roof slope is 3:12.

Table 1

Attachment of Minimum 26-gauge Steel PBR Roofing Panels to Wood Purlins

Design Wind Pressure	Panel Fastener Pattern	Panel Fastener Spacing	Wood Purlin Spacing	Attachment of Wood Purlins to Roof Framing
-78.5 psf	12"-12"-12"	24" on center	24" on center	Two No. 9 x 2-1/2" wood screws
-161.0 psf	12"-12"-12"	12" on center	12" on center	Two No. 9 x 2-1/2" wood screws

Table 2

Attachment of Minimum 26-gauge Steel PBR Roofing Panels to 15/32" Plywood Deck

Design Wind Pressure	Panel Fastener Pattern	Panel Fastener Spacing
-63.5 psf	12"-12"-12"	24" on center
-123.5 psf	12"-12"-12"	12" on center

Installation Over an 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 prior to the installation of the roof 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: The metal roofing panels must be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Wood Purlins: The 1x4 wood purlins must be secured to wood framing with two No. 9 x 2-1/2" wood screws at each roof framing member. The fasteners must be long enough to penetrate a minimum of 1-3/4" into the roof framing. Roof framing spaced a maximum of 24" on center.

Attachment of Metal Roof Panels to the Wood Purlins or Plywood Deck: The metal roofing panels must be secured to the wood purlins or plywood deck with minimum No. 10-14 x 1-1/2" long Panel-Tite High-Low w/ washer. The fastener pattern and spacing is as specified in Table 1 and 2. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the plywood deck.

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

Panel Side Laps: The panels are stitched together with minimum 1/4-14 x 7/8" lap tek screws with a 15mm bonded sealing washer. The fasteners are spaced 20" on center along the length of the side lap.

Trims, Closures, and Accessories: Components, such as eave trim, rake trim, hip trim, and valley trim, must be installed 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.