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Product Evaluation

RC638 | 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-638

Effective Date: January 1, 2021
Re-evaluation Date: January 2025

Product Name: PTXMR-450 Snap Lock Standing Seam Steel Roof Panels Installed Over a Plywood Deck

Manufacturer: Prime Texas Metal Roofs
2417 North Freeway
Houston, TX 77009
(832) 993-7507

General Description:
PTXMR-450 is a snap lock standing seam metal roof system. The 24-gauge steel material is ASTM A 792 AZ-55, Grade 50, with a 50 ksi yield point with optional paint finishes. The maximum height of the female rib is 1-1/2". The panel has a maximum width of 16-5/8". The panel can be formed in continuous lengths and interlocks to adjoining panels by snapping male and female legs together and fastening the panel to the deck using a concealed fastener system (clips with screws). The panel rollformer is from New Tech Machinery Corp. with an SS450SL panel profile.

Limitations:
Roof Decking: Install the metal roof panels with clips over a minimum 15/32" thick plywood wood deck.

New Roof Deck Attachment: The roof deck attachment must meet or exceed the uplift requirements of the IRC and IBC.

Design Wind Pressures: For installations to minimum 15/32" thick plywood roof decks, Table 1 specifies the design wind pressure limitations.

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 the 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.

Roof Slope: The metal roof panels may be installed on roofs with a roof slope as low as 3:12.

Design Wind Pressures: For installations to minimum 15/32" thick plywood decks with 1-3/4" wide and 1-1/4" high, 24-gauge, galvanized steel fixed clips, secured to the roof deck using two (2) No. 10-12 x 1" long Pancake head Type A wood screws, Table 1 specifies the design wind pressure limitations corresponding to different panel clip spacings.

Table 1
Minimum 24-gauge PTXMR-450 Snap Lock Standing Seam Steel Panels to Minimum 15/32" Plywood

Design Wind Pressure (psf)	Panel Clip Spacing
-52.5 psf	18" o.c.
-60.9 psf	15" o.c.
-69.3 psf	12" o.c.
-77.6 psf	9" o.c.
-86.0 psf	6" o.c.

Installation:
General: Install the steel roof panels in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Roof Framing Members: Space the roof-framing members at maximum of 24" on center.

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

Attachment of Metal Roof Panels to the Roof Deck: The metal roofing panels must be secured to the roof deck as follows:

Roofing Panels: The panels are secured to the deck with one-piece, 24-gauge, galvanized steel clips. The clips are 1-3/4" wide and 1-1/4" high. Each clip is secured to the roof deck using two #10-12 x 1" long, No. 2 Phillips Drive, Pancake head screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. Clips are spaced as specified in Table 1. (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 Ends and Edges: 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.

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.