

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION RC-227

Effective February 1, 2014

*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 shall be subject to reevaluation in **February 2018**.*

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.

PBR Metal Roofing Panels Installed Over Steel Purlins, manufactured by

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will be accepted for use in areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

This evaluation report is for PBR metal roofing panels installed over steel purlins. The metal roofing panels are minimum 26 gauge Galvalume coated steel. The metal roofing panels have 36 inches of coverage. The metal roof panels have a 1 ¼" rib height. The metal roofing panels conform to ASTM A792, SS Grade 80 Class 1 or Class 2, with a minimum yield strength of 80 ksi. The metal roofing panels can be furnished painted over an AZ 50 hot-dipped aluminum zinc alloy coating or an acrylic-coated Galvalume steel with an AZ 55 hot-dipped aluminum zinc alloy coating. The metal roofing panels can be painted with silicone polyester products or with Kynar paint systems.

LIMITATIONS

Roof Framing: The metal roofing panels shall be installed over open steel purlins.

New Roof Framing Attachment: The roof framing shall meet or exceed the uplift requirements of the International Residential Code or International Building Code and shall be installed as required for resistance to wind loads.

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

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as ½:12 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.

Installation Over an Existing Roof Covering: Not permitted.

Table 1

Attachment of minimum 26 gauge PBR panel metal roofing panels to steel purlins

Design Wind Pressure	Purlins	Attachment of Panel to Steel Purlins
-45 psf	Minimum 16 gauge; 5'-0" on center	Fasteners @ 12"-12"-12"; 5'-0" on center

INSTALLATION INSTRUCTIONS

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

Steel Purlins: The minimum thickness of steel and the maximum spacing of the purlins shall be as specified in Table 1.

Underlayment: N/A.

Attachment of Metal Roof Panels to the Steel Purlins: The metal roofing panels shall be secured to the steel purlins with No. 12-14 x 1 1/4" long HWH self-driller screws with a sealing washer manufactured by SFS. A line of fasteners shall be located along each steel purlin. The fastener pattern and the spacing of the fasteners shall be as specified in Table 1. The fasteners shall be long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin. Refer to Figure 1 in this evaluation report.

Panel Side Laps: The panels are stitched together with minimum 1/4"-14 x 7/8" Lap Tek screws with a sealing. The fasteners shall be spaced 20 inches on center along the length of the side lap.

Panel Ends and End Laps to the Steel Purlins: Minimum No. 12-14 x 1 1/4" long HWH self-driller screws with a sealing washer manufactured by SFS. The fastener pattern shall be as specified in Table 1. The fasteners shall be long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin. Refer to Figure 1 for an illustration of the fastener pattern.

Panel Edges to the Steel Purlins: Minimum No. 12-14 x 1 1/4" long HWH self-driller screws with a sealing washer manufactured by SFS. The fastener pattern shall be as specified in Table 1. The fasteners shall be long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin. Refer to Figure 1 for an illustration of the fastener pattern.

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

Note: The manufacturer's installation instructions shall be available on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.

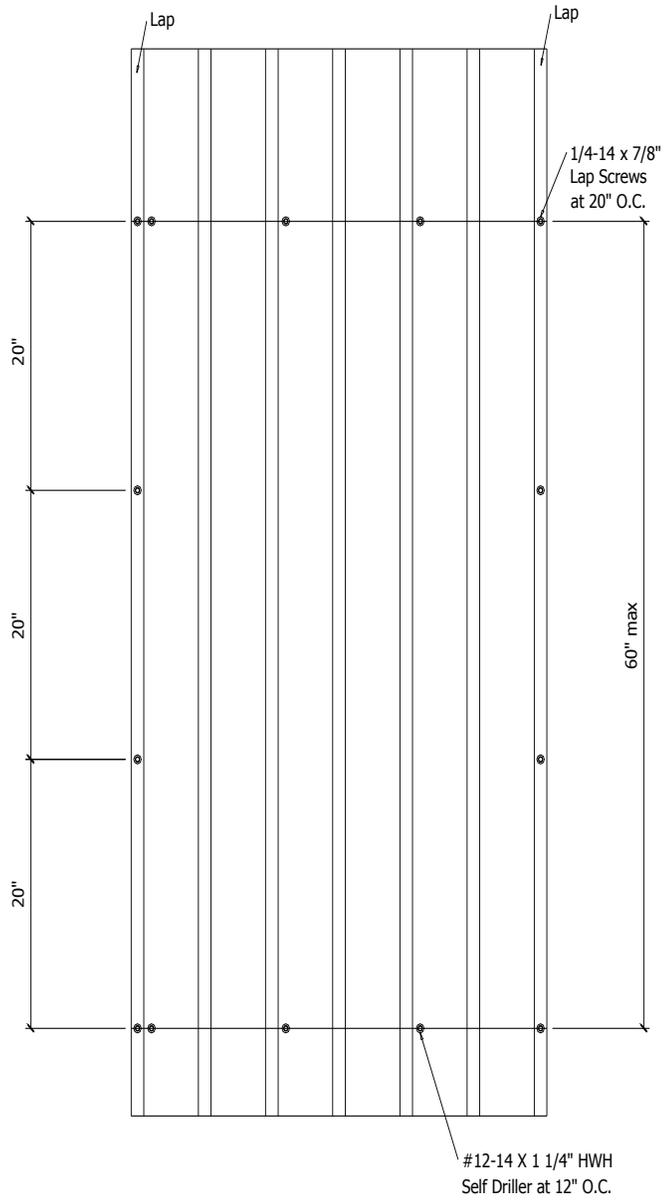


Figure 1. Minimum 26 Gauge PBR Panel Fastener Patterns