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Product Evaluation

RC570 | 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-570

Effective Date: May 1, 2022
Re-evaluation Date: May 2026

Product Name: 26-gauge PBR Steel Roofing Panels installed over Steel Purlins

Manufacturer: Steel Building Supply, Inc.
1154 State Hwy 7 East
Center, TX 75935
(936) 598-6373

General Description:
The PBR steel roof panel is a minimum 26-gauge steel panel that has an effective width of 36". The panel has a yield strength of 80,000 psi.

Limitations:
Roof Framing: Install the metal roof panels over minimum 16-gauge steel purlins as specified in Table 1.

New Roof Framing Attachment: The roof framing must meet or exceed the uplift requirements of the IRC and IBC.

Design Wind Pressures: Table 1 specifies installation to minimum 16-gauge steel purlins and the design wind pressure limitations.

Installation Over an Existing Roof Covering: Installation over an existing roof covering is not permitted.

Roof Slope: The metal roof panels may be installed on roofs with a roof slope as low as 1/2:12 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. The maximum roof slope is 21:12

Table 1
Attachment of Minimum 26-gauge PBR Steel Roofing Panels to Steel Purlins

Design Wind Pressure	Steel Purlins	Attachment of Panel to Steel Purlins
-52.5 psf	16-gauge; 5'-0" on center	No. 12-14 x 1" long self-drilling, self-tapping, hex head, steel screws with a 5/8" OD formed steel washer **OR** 1/4-14 HHAB self-tapping, steel screws with a 5/8" OD dome shaped steel washer and neoprene sealing washer **OR** No. 14-10 HHA self-tapping, steel screws with a 5/8" OD dome shaped steel washer and neoprene sealing washer

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

Roof Framing Members: Table 1 specifies the minimum thickness and spacing of the steel purlins.

Underlayment: Not Applicable.

Insulation: Optional. Maximum thickness to be 6".

Panels to Steel Purlins: Secure the metal roofing panels to the steel purlins with fasteners as specified in Table 1. Locate a line of fasteners along each steel purlin. Spacing to be 12" on center beginning 2-1/2" from the centerline on one side of each major rib. Use fasteners long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin.

Panel Side Laps: The panels must overlap one corrugation. The panels are stitched together with fasteners as specified in Table 1. Space the fasteners 20" on center along the length of the side lap with a fastener in line with the purlin fasteners.

Trims, Closures, and Accessories: Install components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim as required by the manufacturer.

Panel Ends and End Laps to Purlins: Secure the metal roofing panels to the steel purlins with fasteners as specified in Table 1. Locate a line of fasteners along the steel purlin. Spacing to be in a 5"-7"-5"-7" pattern beginning 2-1/2" from the center line on both sides of each major rib. Use fasteners long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin.

Panel Edges: 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.