

Product Evaluation

RC603 | 0923

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-603

Effective Date: September 1, 2023

Re-evaluation Date: September 2027

Product Name: 26-Gauge Steel PBR Roof Panels Installed Over Steel Purlins

Manufacturer: Reed's Metals – Cornerstone BB
19 E. Lincoln Road NE
Brookhaven, MS 39601
(601) 823-6516

General Description:

The PBR metal roofing panel is a minimum 26-gauge galvalume steel panel. The PBR panel has a coverage of 36" with 1-1/4" tall major ribs at 12" on center. The panel conforms to ASTM A792, Grade 80, with a yield strength of 80,000 psi. The metal panels are available in optional painted finishes.

Limitations:

Roof Framing: The metal roofing panels must be installed over minimum 16-gauge steel purlins.

New Roof Decking 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 Pressures: The design pressure uplift load resistance must be as specified in Table 1.

Table 1: Attachment of minimum 26-gauge steel PBR roofing panels to steel purlins

Design Wind Pressure (psf)	Purlins	Fastener Pattern	Fastener Pattern Spacing
-41.6 / +49.5	Minimum 16-Gauge 5'-0" on center	12"-12"-12"	5'-0" on center
-55.0 / +67.2	Minimum 16-Gauge 4'-6" on center	12"-12"-12"	4'-6" on center
-68.5 / +85.0	Minimum 16-Gauge 4'-0" on center	12"-12"-12"	4'-0" on center
-81.9 / +102.8	Minimum 16-Gauge 3'-6" on center	12"-12"-12"	3'-6" on center
-95.4 / +120.6	Minimum 16-Gauge 3'-0" on center	12"-12"-12"	3'-0" on center
-108.8 / +138.3	Minimum 16-Gauge 2'-6" on center	12"-12"-12"	2'-6" on center
-122.3 / +156.1	Minimum 16-Gauge 2'-0" on center	12"-12"-12"	2'-0" on center

Roof Slope: Install the metal roofing panels on roofs with a roof slope as low as 1/2:12 if lap sealant is used in the panel side laps. If sealant is not used in the panel side laps, then the minimum roof slope is 3:12.

Installation Over an Existing Roof Covering: N/A.

Installation:

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

Steel Purlins: Table 1 specifies the minimum thickness of the steel and maximum spacing of the purlins.

Underlayment: NA

Attachment of Metal Roofing Panels to the Steel Purlins:

Secure the PBR metal roofing panels to the steel purlins with No. 12-14 x 1-1/4" long HWH Flange Seal Head self-driller fasteners with an EPDM washer. Locate a line of fasteners along each purlin. Table 1 specifies the fastener pattern and the spacing of the fasteners. Use fasteners long enough to ensure a minimum penetration of 3-pitches of thread below the steel purlin.

Panel Side Laps: The panels are stitched together with minimum 1/4-14 x 7/8" HWH Flange Seal Head fasteners with an EPDM washer SD1. The fasteners must be spaced a maximum of 20" on center along the length of the side lap.

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.

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.