

## Product Evaluation

RC666 | 0721

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-666

**Effective Date:** July 1, 2021

**Re-evaluation Date:** July 2025

**Product Name:** PBR Steel Panels Installed over Steel Purlins or Steel Girts

**Manufacturer:** Hilco Metal Roofing Supply  
12503 Highway 6  
Navasota, TX 77868  
(936) 825-0500

### General Description:

This evaluation report is for PBR metal panels installed over steel purlins or steel girts. The metal panels are minimum 26-gauge Galvalume coated steel. The metal panels have 36" of coverage. The metal panels have a 1-1/4" rib height. The metal panels conform to ASTM A792, SS Grade 80 for 26-gauge and ASTM SS Grade 50 for 24-gauge with an AZ 50 or AZ55 aluminum zinc alloy coating. The metal panels conform to ASTM A653, SS Grade 80 for 26-gauge and ASTM SS Grade 50 for 24-gauge with G90 coating. The metal panels can be supplied painted with silicone polyester products or with Fluoropon paint systems.

### Limitations:

**Roof Deck:** Install the roof panels over open minimum 16-gauge steel purlins or girts.

**New Roof or Wall Framing Attachment:** The roof or wall framing must meet or exceed the uplift or suction requirements of the IRC or the IBC.

**Design Wind Pressures:** The design pressure negative wind load resistance must be as specified in Table 1.

**Table 1:** Attachment of Minimum 26-gauge PBR Panels to Steel Purlins or Girts

16-gauge Steel Purlins or Girts	Design Wind Pressure (psf)
5'-0" on center	-36.4
4'-6" on center	-48.5
4'-0" on center	-60.7
3'-6" on center	-72.8
3'-0" on center	-85.0
2'-6" on center	-97.1
2'-0" on center	-109.3

**Roof Slope:** If using sealant on the panel side laps, install the metal panels on roofs with a roof slope as low as 1/2:12. If sealant is not used on the panel side laps, then the minimum slope is 3:12.

**Installation over Existing Roof Covering:** Not permitted.

**Installation:**

**General:** Install the steel roof panels in accordance with the manufacturer's installation instructions and this production evaluation.

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

**Underlayment:** N/A.

**Attachment of Panels to the Steel Purlins or Girts:** Secure to the steel purlins or girts with No. 12-14 x 1-1/4" long hex head self-drilling screws a sealing washer. Locate a line of fasteners (12"-12"-12") along each steel purlin or girt. Table 1 specifies the purlin or girt spacing. Use fasteners long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin or girt.

**Panel Side Laps:** The panels are stitched together with minimum 1/4"-14 x 7/8" hex head lap screws with a sealing washer. Space the fasteners 20" on center along the length of the side lap.

**Panel Ends and End Laps to Steel Purlins or Girts:** Minimum No. 12-14 x 1-1/4" hex head self-drilling screws with a sealing washer. Locate a line of fasteners (12"-12"-12") along the steel purlin or girt. Table 1 specifies the purlin or girt spacing. Use fasteners long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin or girt.

**Panel Edges to the Steel Purlins or Girts:** Minimum No. 12-14 x 1-1/4" hex head self-drilling screws with a sealing washer. Table 1 specifies the fasteners pattern. Use fasteners long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin or girt.

**Trims, Closures, and Accessories:** Components, such as 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. All fasteners must be corrosion resistant as specified in the IRC and the IBC.