

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION RC-168

Effective February 1, 2013

*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 **October 2015**.*

*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.*

**26 Gauge PBR Panel Metal Roofing Panels** manufactured by

**Rigid Global Buildings**  
**18933 Aldine Westfield**  
**Houston, Texas 77073**  
**Telephone: (281) 443-9065**

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

The PBR panel metal roofing panels are minimum 26 gauge galvalume steel with an optional paint finish. The 26 gauge metal roofing panels have an actual coverage of 36 inches in width. Each metal roofing panel has major ribs that are 1.25 inches deep. The metal roofing panels conform to ASTM A792, with an 80,000 psi yield point.

## LIMITATIONS

**Roof Framing:** The PBR-panel metal roofing panels shall be secured mechanically to minimum 16 gauge open steel purlins. The light gauge steel purlins shall be spaced a maximum of 60 inches on center.

**Roof Framing Attachment:** The light gauge steel purlins shall be secured to the structure in such a manner to meet or exceed the uplift requirements of the International Residential Code or International Building Code.

**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  $\frac{1}{2}$ :12 if lap sealant is applied. Lap sealants shall be applied in accordance with the manufacturer's approved installation instructions. If lap sealant is not utilized, then the minimum roof slope shall be 3:12.

**Installation Over an Existing Roof Covering:** Not Permitted.

**Table 1**

Attachment of minimum 26 gauge PBR panel metal roofing panels to minimum 16 gauge steel purlins

Design Wind Pressure	Purlins	Attachment of Panel to Steel Purlins
-124.8 psf	Minimum 16 gauge; 2'-0" on center	Fasteners @ 12"-12"-12" 2'-0" on center
-111.0 psf	Minimum 16 gauge; 2'-6" on center	Fasteners @ 12"-12"-12" 2'-6" on center
-97.3 psf	Minimum 16 gauge; 3'-0" on center	Fasteners @ 12"-12"-12" 3'-0" on center
-83.6 psf	Minimum 16 gauge; 3'-6" on center	Fasteners @ 12"-12"-12" 3'-6" on center
-69.9 psf	Minimum 16 gauge; 4'-0" on center	Fasteners @ 12"-12"-12" 4'-0" on center
-56.2 psf	Minimum 16 gauge; 4'-6" on center	Fasteners @ 12"-12"-12" 4'-6" on center
-42.5 psf	Minimum 16 gauge; 5'-0" on center	Fasteners @ 12"-12"-12" 5'-0" on center

### INSTALLATION INSTRUCTIONS

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

**Panels:** The PBR panel metal roofing panels shall be secured to the minimum 16 gauge steel purlins as specified in Table 1 and in accordance with this section. Refer to Figure 1 for an illustration of the required fastener pattern.

**Attachment of Metal Roof Panels to Steel Purlins:** The PBR panel metal roof panels shall be secured to the roof framing with minimum No. 12-14 x 1 ¼" long, HWH self-driller screws with integral. The fasteners shall be long enough to ensure a minimum penetration of ¼" below the light gauge steel purlins. A line of fasteners are to be located along each steel purlin with a 12"-12"-12" pattern as specified in Table 1. Refer to Figure 1 of this evaluation report. The fasteners shall be long enough to penetrate a minimum of 3 pitches of thread below the steel purlin.

**Panel Side Laps:** The panels are stitched together with minimum ¼-14 x 7/8" Lap Tek screws. The fasteners shall be spaced 20 inches on center along the length of the side lap.

**Panels Edges, Ends, and End Laps to Steel Purlins:** The PBR panel metal roof panel edges, ends, and end laps shall be secured to the roof framing with minimum No. 12-14 x 1 ¼" long, HWH self-driller screws with integral. The fasteners shall be long enough to ensure a minimum penetration of ¼" below the light gauge steel purlins. A line of fasteners are to be located along the steel purlin with a 5"-7"-5"-7"-5" pattern. The fasteners shall be long enough to penetrate a minimum of 3 pitches of thread below the steel purlin.

**Trims, Closures, and Accessories:** Components, such as the eave trim, rake start trim, rake end, rake tie-in, ridge trim, hi-side tie-in trim, high eave 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.

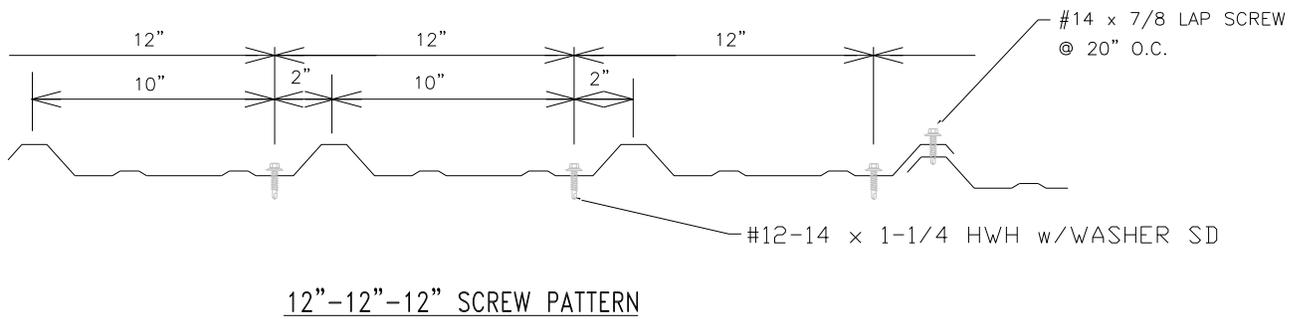


Figure 1. PBR Panel Fastener Pattern Detail (Minimum 26 Gauge Panel)