

## Product Evaluation

RC265 | 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-265 **Draft Evaluation Report**

**Effective Date:**

May 1, 2022

**Re-evaluation Date:**

May 2026

**Product Name:** PBR-Panel Steel Roofing Panels Installed Over Steel Purlins

**Manufacturer:** Metal Sales Manufacturing Corporation  
3838 North General Bruce Dr.  
Temple, TX 76501  
(254) 791-6550

### General Description:

The PBR-Panel metal roofing panels are formed metal roofing panels. The panels have 36" of coverage. The roofing panels have ribs 1-1/4" high and spaced 12" on center. The metal roofing panels are manufactured from a 26-gauge (0.019" thick) aluminum-zinc alloy-coated steel with a Galvalume or painted finish with a minimum yield strength of 80 ksi. The metal roofing panels conform to ASTM A 653 or ASTM A 792.

### Limitations:

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

**New Roof Framing 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.

**Roof Slope:** The metal roofing panels may be installed on roofs with a roof slope as low as 1/2:12 if sealant is used on the side laps. If sealant is not used on the panel side laps, the minimum roof slope is 3:12. Application of the sealant must be in accordance with the manufacturer's installation instructions and the PBR-Panel Metal Roof Panel Details.

**Installation Over an Existing Roof Covering:** Not permitted

**Table 1**

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

Design Wind Pressure (psf)	Attachment of Roof Panel to Steel Purlins
-41.9	Fastener Pattern #1 @ 5'-0" on center
-60.6	Fastener Pattern #1 @ 4'-6" on center
-79.4	Fastener Pattern #1 @ 4'-0" on center
-98.1	Fastener Pattern #1 @ 3'-6" on center
-117.0	Fastener Pattern #1 @ 3'-0" on center
-136.0	Fastener Pattern #1 @ 2'-6" on center
-154.0	Fastener Pattern #1 @ 2'-0" on center

**Installation:**

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

**Steel Purlins:** The minimum thickness of the steel purlins must be 16-gauge. The maximum spacing of the steel purlins must be 5 feet on center.

**Underlayment:** Not required.

**Attachment of Metal Roofing Panels to the Steel Purlins:** The metal roofing panels must be secured to the steel purlins with No. 12-14x1-1/4" HWH self-drilling screws with a sealing washer manufactured by Atlas. A line of fasteners must be located along each steel purlin. The spacing of the fasteners must be as determined from Table 1. The fasteners must be long enough to ensure a minimum of three threads below the steel purlin. The fasteners in the purlin nearest the ends of the metal roofing panels must be per Fastening Pattern #2. The fasteners in the interior purlins must be per Fastening Pattern #1. Refer to Figure 1 for interior and panel end fastening patterns.

**Panel Side Laps:** The panels must overlap one corrugation. The panels are stitched together with a minimum 1/4"-14x7/8" lap screw manufactured by Atlas. The lap screws must be spaced 12" on center along the length of the side lap.

**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 and the Metal Sales PBR-Panel Metal Roof Panel Details.

**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.