

Product Evaluation

RC358 | 0220

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-358

Effective Date: February 1, 2020

Re-evaluation date: February 2024

Product Name: Minimum 24-Gauge PBR Steel Roofing Panels over Steel Purlins

Manufacturer: Metal Building Components, Inc. (MBCI), L.P., a division of NCI, L.P.
14031 West Hardy
Houston, TX 77060
(281) 445-8555

General Description:

The PBR metal roofing panel is minimum 24 gauge, 0.024" thick, coated steel. The 24-gauge panel has an actual coverage of 36". The metal roof panels have a 1-1/4" rib height. The panel conforms to ASTM A 792 Grade E, 50,000 psi yield point and galvanized.

Limitations:

Roof Framing: The metal roofing panels must be installed over open 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 panels must not be installed on roofs with a roof slope less than 1/2:12.

Installation Over an Existing Roof Covering: Not permitted.

Table 1. Attachment of Minimum 24-Gauge PBR Steel Roofing Panels to Steel Purlins

Design Wind Pressure	Purlins	Fastener Pattern/Spacing
-158.5 psf	Minimum 16-gauge; 1'-0" o.c.	Fasteners at 12"-12"-12"; 1'-0" o.c.
-60.0 psf	Minimum 16-gauge; 5'-0" o.c.	Fasteners at 12"-12"-12"; 5'-0" o.c.

Installation Instructions:

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 and maximum spacing of the purlins must be as specified in Table 1.

Underlayment: N/A.

Attachment of Metal Roofing Panels to the Steel Purlins: The PBR metal roofing panels must be secured to the steel purlins with No. 1/4-14 x 1-1/4" long HWH Ultimate Long Life Head SD #3 by Atlas. A line of fasteners must be located along each purlin. The fastener pattern and the spacing of the fasteners must be as specified in Table 1. The fasteners must be 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" Lap Tek screws with a sealing washer. The fasteners must be spaced at 12" on center along the length of the side lap.

Trims, Closures, and Accessories: Components, such as the 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. Use corrosion resistant fasteners as specified in the IRC and the IBC.