



Product Evaluation

RC500 | 1016

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-500

Effective Date: October 1, 2016

Re-evaluation Date: October 2020

Product Name: Residential Steel Roofing Panels Installed Over a Plywood Deck

Manufacturer: Reed's Metals, Inc.
19 E. Lincoln Drive NE
Brookhaven, MS 39601
(855) 926-3825

General Description:

The Residential Panel is a 29-gauge or 26-gauge galvalume steel panel with an optional paint finish. The metal roofing panels have an actual coverage of 36". Each metal panel has ribs that are 3/4" deep. The metal roofing panels conform to ASTM A792, with an 80,000 psi yield point.

This product evaluation report is for Residential metal roofing panels that are secured to a nominal 15/32" APA plywood deck. Thicker plywood may be used; however; the design pressure rating for the metal panels will be as specified in this evaluation report

Limitations:

Roof Deck: The metal roofing panels must be installed over nominal 15/32" APA rated plywood deck. The roof framing must not exceed 24" on center.

New Roof Framing Attachment: The roof framing must meet or exceed the uplift requirements of the IRC or the IBC and must be as required for resistance for wind loads.

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 panel side laps. If sealant is not used on the panel side laps, then the minimum roof slope is 3:12.

Design Pressure: The design pressure uplift load resistance must be as specified in Table 1.

Table 1

Attachment of minimum 29 gauge or 26-gauge Residential Metal Roofing Panels to Minimum 15/32" Plywood Deck

Design Pressure	Attachment of Panel to Plywood Deck
-146.0 psf	Fasteners @ 6.5"-2.5"-6.5"-2.5"-6.5"-2.5"-6.5"; 12" on center
-71.8 psf	Fasteners @ 9"-9"-9"; 24" on Center

Installation over Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing or roll roofing applied over an existing minimum 15/32" APA rated plywood deck. Note: Inspection of the existing roof deck must be made. The condition of the existing roof deck must be acceptable to receive the roof panels before roof panel installation can begin. Installation of underlayment not required.

Installation:

General Installation Requirements: The metal roofing panels shall be installed in accordance with the manufacturer's installation instructions and this product evaluation.

- **Underlayment:** A minimum of one layer of No. 30 (Type II) asphalt felt or equivalent must be used. The underlayment must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed with 6" side laps and 3" end laps. The underlayment must be applied with corrosion resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.
- **Attachment of Metal Roof Panels to Plywood Deck:** The metal roofing panels must be secured to the plywood deck with minimum No. 9-15 x 1-1/2" long HWH Woodgrip screws with sealing washers. 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 1/4" below the wood deck.
- **Panel Side Laps:** The panel side laps are stitched together as required by the manufacturer.
- **Panel Ends and End Laps to Plywood Deck:** The metal roofing panels must be secured to the plywood deck with minimum No. 9-15 x 1-1/2" long HWH Woodgrip screws with sealing washers. 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 1/4" below the wood deck.
- **Panel Edges to Plywood Deck:** The panel edges are attached to the wood deck as required by the manufacturer.
- **Trims, Closures and Accessories:** Components such as eave, rake rim, rake trim, hip trim, and valley trim must be 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, the IBC, and the Texas Revisions.