

Product Evaluation

RC726 | 0723

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-726

Effective Date: September 1, 2023

Re-evaluation Date: July 2027

Product Name: R-Panel Metal Roofing Panel Installed over Plywood Deck

Manufacturer: Hercules Sheet Metal, Inc.
5001 Paris Rd
Chalmette, Louisiana 70043
(504) 277-7541

General Description:

The 26 Ga. R-Panel Metal Roof panel is minimum 26-gauge galvalume steel panels with an optional paint finish. The metal roofing panel is a through fastened panel with a maximum coverage of 36". The panel has 1-1/4" tall major ribs at 12" O.C. The 26 Ga. Steel material is ASTM A 792 Grade 80, with an 80 ksi yield point with optional painted finishes.

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

Limitations:

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

New Roof Decking 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. Minimum 8d ring shank nails at 4" O.C. edges and intermediate supports.

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 Wind Pressures: The design pressure uplift load resistance must be as specified in Table 1.

Table 1: Attachment of R-Panel Metal Roofing Panels to Minimum 15/32" Plywood Decking

Design Wind Pressure (psf)	Fastener Pattern	Fastener Pattern Spacing	Fastener
-78.5	12"-12"-12"	24"	#14-10 x 1-1/4"
-116.0	12"-12"-12"	18"	#14-10 x 1-1/4"
-153.5	12"-12"-12"	12"	#14-10 x 1-1/4"
-191.0	12"-12"-12"	6"	#14-10 x 1-1/4"

Installation Over an 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. The existing roof deck must be minimum 15/32" plywood. Note: Inspection of the existing roof deck must be made before installing the roofing panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before the roof panel installation can proceed.

Installation:

General: Install the metal roofing panels in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Underlayment: Use a minimum of one layer of No. 30 (Type II) asphalt felt or equivalent. Use underlayment that complies 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. Apply the underlayment with corrosion resistant fasteners in accordance with the manufacturer's installation instructions and the IRC or the IBC. Fasteners must be applied along the overlaps not farther than 36" on center.

Attachment of Metal Roof Panels to Plywood Deck: The 26 Ga. R-Panels shall be installed using a No. 14-10 x 1-1/4" HWH Woodscrew T17 with bonded washer at the fastener pattern and fastener spacing specified in Table 1. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length must be increased so that the fasteners are long enough to ensure a minimum penetration of 1/4" below the existing plywood roof decking.)

Panel Side Lap Fastener: The panel side laps are fastened together with minimum (1) 1/4-14 x 7/8" Cupped HWH SD1 with washer or equal at 20" O.C

Panel Ends and Edges: As required by the manufacturer.

Trims, Closures, and Accessories: Install components, such as eave trim, rake trim, ridge trim, hip trim, and valley trim, as required by the manufacturer.

Alternative Fasteners: Substitution of alternative fasteners of equal or greater strength may be substituted.

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.