

Product Evaluation

RC140 | 0923

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-140

Effective Date: September 1, 2023

Re-evaluation Date: September 2027

Product Name: Double-Lock-Zee-Lock Standing Seam Metal Roof Panels Installed over a Plywood Deck

Manufacturer: Berridge Manufacturing Company
6515 Fratt Road
San Antonio, TX 78218
(210) 650-3050

General Description:

The Double-Lock Zee-Lock metal roofing panels are standing seam metal roofing panels. The metal roofing panels have 16" of coverage. The metal roof panels have a 2" rib height. The metal roofing panels are manufactured from minimum 24-gauge coated steel that conform to ASTM A792, Grade 40, with a minimum yield strength of 40,000 psi.

Limitations:

Roof Framing: The metal roofing panels must be installed over a minimum 15/32" plywood roof deck.

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.

Table 1

Attachment of minimum 24-gauge Double Lock Zee-Lock metal roofing panels to minimum 15/32" plywood roof deck

Design Wind Pressure	Attachment to 15/32" Plywood
-101.0 psf	Fasteners @ 16" o.c.
-174.3 psf	Fasteners @ 8" o.c.

Installation Over an Existing Roof Covering: Not permitted.

Installation:

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

Panels: The metal roofing panels must be secured to the roof framing as specified in Table 1 and in accordance with this section.

Underlayment: Minimum 30 pound resin-bound chopped-glass-fiber substrate (Elk Versashield™) by Elk Corporation, with 2" side laps and 4" end laps, fastened to the roof deck with galvanized roofing nails and tin caps. The Elk Versashield™ underlayment must be fastened to the roof deck with fasteners spaced 12" on center in the field (one row) and 6" on center at the side laps.

Alternative Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The felt must be installed with 2" side laps and 4" end laps. The felt must be fastened to the roof deck with galvanized roofing nails with tin caps 12" on center in the field (one row) and 6" on center at the side laps.

Attachment of Metal Roof Panels to the Roof Deck: The metal roofing panels must be secured to the roof framing in the following manner:

Roofing Panels to Plywood Deck: Minimum No. 12-11 x 1" long, GP Concealor screws, manufactured by Triangle Fastener Company. The Zee-Rib clips are minimum 24-gauge galvanized steel with a yield strength of 40 ksi. The Zee-Rib clips are continuous and extend the length of the metal roofing panels. The Zee-Rib clips are secured to the roof deck with the screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. The fasteners must be spaced along the continuous steel Zee-Rib clips as specified in Table 1.

Trims, Closures, and Accessories: Components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim shall 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.