

## Product Evaluation

RC276 | 0320

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-276

**Effective Date:** March 1, 2020

**Re-evaluation Date:** March 2024

**Product Name:** Double Lock Zee-Lock Standing Seam Steel Roof Panels Installed over Steel Purlins

**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 22-gauge coated steel that conform to ASTM E08, with a minimum yield strength of 52,400 psi.

### 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 metal roofing panels may be installed on roofs with a roof slope as low as 1/2:12.

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

**Table 1.** Attachment of minimum 22-gauge Double Lock Zee-Lock metal roofing panels to steel purlins

Design Wind Pressure	Purlins	Attachment of Panel to Steel Purlins
-107.5 psf	Minimum 16-gauge; 5'-0" on center	Four (4) fasteners at 60" o.c.
-140.0 psf	Minimum 16-gauge; 2'-6" on center	Three (3) fasteners at 30" o.c.

**Installation:**

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

**Steel Purlins:** Berridge Manufacturing Company steel "CEE" or "ZEE" purlins. The minimum thickness of the steel and the maximum spacing of the purlins must be as specified in Table 1.

**Attachment of Metal Roof Panels to the Steel Purlins:** The metal roofing panels must be secured to the steel purlins with No. 12-14 x 1-1/4" HWH T3 screws with 5/8" outer diameter Fenderhead washers and with Zee-Rib clips manufactured by Berridge Manufacturing Company. The Zee-Rib clips are minimum 24-gauge galvanized steel with a 22-gauge 5" long backer plate located over each purlin. The Zee-Rib clips are continuous and extend the length of the metal roofing panels. The Zee-Rib clips are secured to the steel purlins with the number of screws specified in Table 1. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the steel deck. The fasteners must be located at each steel purlin.

**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.