

## Product Evaluation

RC645 | 0321

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-645

**Effective Date:** April 1, 2021

**Re-evaluation Date:** April 2025

**Product Name:** Single Lock Zee-Lock Standing Seam Steel Roof Panels Installed over an Insulated Steel Deck

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

### General Description:

The Single Lock Zee-Lock standing seam steel roof panel is a formed steel roof panel. The steel roof panel has a 2" rib height. The steel roof panel has a 16" wide exposure. The steel roof panels are either 22-gauge (Fy=55.0 ksi) or 24-gauge (Fy=55.0 ksi) steel. The steel panels are secured to the steel roof deck with a 90-degree single lock seam.

### Limitations:

**Roof Deck:** Minimum 22-gauge steel roof deck.

**Steel Roof Framing:** Minimum 12-gauge steel spaced 5'-0" on center.

**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.

**Roof Slope:** The steel roof panels may be installed on roofs with a roof slope as low as 1/2:12.

**Design Wind Pressures:** The design pressure uplift load resistance must be as specified in Table 1 and Table 2.

**Table 1:**

Attachment of Minimum 22-Gauge Single Lock Zee-Lock Steel Roof Panels to Minimum 22-gauge Steel Deck

Design Pressure	Panel Clip	Fastener	Fastener Spacing
116.0 psf	24-Gauge Continuous Zee-Rib	#14-13 DP1 Concealor	16" o.c.

**Table 2:**

Attachment of Minimum 24-Gauge Single Lock Zee-Lock Steel Roof Panels to Minimum 22-Gauge Steel Deck.

Design Pressure	Panel Clip	Fastener	Fastener Spacing
101.0 psf	24-Gauge Continuous Zee-Rib	#14-13 DP1 Concealor	16" o.c.

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

**Installation:**

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

**Roof Deck:** Minimum 22-gauge steel roof deck.

**Insulation:** Rigid insulation with polyisocyanurate foam core with fiber reinforced facers laid on top of steel deck. Minimum 20 psi compressive strength. Maximum of two (2) layers of 3" insulation. Secure the insulation to the steel deck with five (5) #14-13 DP1 Pancake head Concealor screws by TFC and 3" steel disks per sheet. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlins

**Roofing Panels to Steel Deck:** The roof panels are secured to the steel deck using a 24-gauge galvalume Zee-Rib continuous clip. The Zee-Rib clip is secured to the roof deck with No. 14-13 Pancake head DP1 Concealor screws by TFC. The on center spacing of the fasteners is specified in Table 1 and Table 2. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlins

**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.