



# Product Evaluation

RC481| 1117

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-481

**Effective Date:** November 1, 2017

**Re-evaluation Date:** November 2021

**Product Name:** 22-Gauge and 24-Gauge Galvalume Double-lock Zee-Lock Panels on 22-Gauge Steel Deck

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

**General Description:** "Zee-Lock" Double Lock Standing Seam Roof Panel - 2" Rib Height, 16" wide, 24-gauge steel roof panel restrained by continuous Zee-Rib panel clips, fastened through optional rigid insulation into 22-gauge steel deck.

## Limitations:

- **Roof Framing:** The galvalume roofing panels must be installed over a minimum 22-gauge steel 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 and Table 2.
- **Roof Slope:** The galvalume roofing panels may be installed on roofs with a roof slope as low as 1/2:12.
- **Fastener Penetration:** Minimum fastener penetration through bottom of steel deck, 1/2".

**Table 1:**

Attachment of minimum 22-Gauge galvalume Zee-Lock metal roofing panels to minimum 22-gauge Steel Deck

Design Pressure	Panel Clip	Fastener	Insulation Thickness	# Fasteners Per Clip	Fastener Clip Spacing
-213.5 psf	Zee-Rib	#14	4"-6" (max)	1	8" o.c.
-142.0 psf	Zee-Rib	#14	4"-6" (max)	1	16" o.c.

**Table 2:**

Attachment of minimum 24-Gauge galvalume Zee-Lock metal roofing panels to minimum 22-gauge Steel Deck.

Design Pressure	Panel Clip	Fastener	Insulation Thickness	# Fasteners Per Clip	Fastener Clip Spacing
-176.0 psf	Zee-Rib	#14	4" (max)	1	8" o.c.
-168.5 psf	Zee-Rib	#14	4" (max)	1	16" o.c.
176.0 psf	Zee-Rib	#14	4"-6" (max)	1	16" O.c.

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

**Installation Instructions:**

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

**Panels:** The galvalume roofing panels must be secured to the roof framing as specified in Table 1 and Table 2.

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

**Roofing Panels to Metal Deck:** The galvalume roofing panels are secured to the deck using 24-gauge galvalume Zee-Rib clips. The Zee-Rib clips are secured to the roof deck with one No. 14-13 DP1 Concealor by TFC for roofs with a maximum insulation thickness of 4", one No. 14-13 Roofgrip by Buildex for 24-gauge panel using a maximum insulation thickness of 4"- 6", and one No. 14-10 Dekfast by SFS Intec for 22-gauge panel. The clip spacing is as shown in Table 1 and Table 2.

- **Panel:** Berridge 24 or 22-gauge galvalume Zee-Lock Panel.
- **Insulation:** Rigid insulation with polyisocyanurate foam core with fiber reinforced facers laid on top of steel deck. Allowable thickness to match that of the insulation thickness shown in Tables 1 and 2 above. Minimum 20 psi compressive strength. When utilizing 4"-6" rigid board insulation, attach to steel deck with five No. 14 fasteners and 3" steel disc per sheet.
- **Deck:** 22-gauge B-deck.

**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 installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.