Product Evaluation

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-210

Effective Date: November 1, 2017
Re-evaluation Date: October 2021

Product Name: Cee-Lock Standing Seam Metal Roof Panels Installed over a Steel Deck

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

General Description:
The Cee-Lock metal roofing panels are snap seam standing seam metal roofing panels. The metal roofing panels have 16-1/2" of coverage. The metal roof panels have a 1-1/2" seam height. The metal roofing panels are manufactured from either 22-gauge steel with a minimum yield strength 50 ksi or 24-gauge coated steel with a minimum yield strength of 44,000 psi. The steel panels conform to ASTM A792.

LIMITATIONS

Roof Framing: The metal roofing panels must be installed over a steel deck. The steel deck is secured to 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 Tables 1-2.

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as 1:12.

Installation Over an Existing Roof Covering: Not permitted.

Table 1
Attachment of minimum 22 gauge Cee-Lock metal roofing panels to a steel deck

Design Wind Pressure	Purlins	Steel Deck	Attachment of Panel to Steel Deck
-131.0 psf	Minimum 12 gauge; 5'-0" on center	Minimum 22 gauge; 50 ksi yield strength	Fasteners at 16" o.c.
-183.5 psf	Minimum 12 gauge; 5'-0" on center	Minimum 22 gauge; 50 ksi yield strength	Fasteners at 8" o.c.

Table 2
Attachment of minimum 24 gauge Cee-Lock metal roofing panels to a steel deck

Design Wind Pressure	Purlins	Steel Deck	Attachment of Panel to Steel Deck
-108.5 psf	Minimum 12 gauge; 5'-0" on center	Minimum 22 gauge; 44 ksi yield strength	Fasteners at 16" o.c.
-116.0 psf	Minimum 12 gauge; 5'-0" on center	Minimum 22 gauge; 44 ksi yield strength	Fasteners at 8" 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 Tables 1-2.

Structural Steel Deck: Steel "B" deck. The minimum thickness of the steel deck and the yield strength of the steel deck must be as specified in Tables 1-2. The steel deck is secured to the steel purlins with No. 12-14 x 1" drill point hex head self-drilling fasteners located in each valley of the steel deck. The steel deck side laps are stitched together with No. 8 x 5/8" modified truss head self-drilling fasteners spaced 18" on center.

Insulation: Minimum 4" of Thermax rigid foam insulation board. Each insulation board is secured to the steel deck with a minimum of five No. 14-13 x 7" DPI Concealor screws manufactured by Triangle Fasteners.

Attachment of Metal Roof Panels to the Steel Deck: The metal roofing panels must be secured to the roof framing with No. 14-13 x 7" DP1 pancake head screws manufactured by Triangle Fasteners and with Cee-Rib clips manufactured by Berridge Manufacturing Company. The Cee-Rib clips are minimum 24-gauge galvanized steel with a yield strength of 40 ksi. The Cee-Rib clips are continuous and extend the length of the metal roofing panels. The Cee-Rib clips are secured to the steel roof deck with the screws. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the steel deck. The fasteners must be spaced along the continuous steel Cee-Rib clips as specified in Tables 1-2.

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