

Product Evaluation

RC504 | 0322

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-504

Effective Date: March 1, 2022

Re-evaluation Date: March 2026

Product Name: Tee-Lock 24-Gauge Steel Standing Seam Roof Panels Installed over a Plywood Deck

Manufacturer: Berridge Manufacturing Co.
6515 Fratt Rd.
San Antonio, TX 78218
(210) 650-3050

General Description:

The Tee-Lock steel roofing panels are steel standing seam roofing panels. The steel roofing panels have a maximum 18" of coverage. The steel roofing panels have a 2-3/8" rib height. The steel roofing panels are manufactured from minimum 24-gauge coated steel that conform to ASTM A792, with a yield strength of 40,000 psi.

Limitations:

Roof Framing: The steel roofing panels must be installed over a minimum 15/32" APA rated plywood 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 Pressure: The design pressure uplift load resistance must be as specified in Table 1 for panels with 18" exposure and as specified in Table 2 for panels with 15" exposure.

Roof Slope: The steel roofing panels must be installed on roofs with a roof slope as low as 2:12.

Installation over an Existing Roof Covering: Not permitted.

Table 1. Attachment of 18" Wide, Minimum 24-gauge Steel Tee-Lock Standing Seam Roofing Panels to Plywood Deck

System	Design Wind Pressure	Deck	Attachment of Panel to Deck
1	-101.0 psf	Minimum 15/32" APA Rated Plywood	Two fasteners at 12" on center
2	-86.0 psf	Minimum 15/32" APA Rated Plywood	Two fasteners at 36" on center

Table 2. Attachment of 15" Wide, Minimum 24-gauge Steel Tee-Lock standing Seam Roofing Panels to Plywood Deck

System	Design Wind Pressure	Deck	Attachment of Panel to Deck
3	-146.0 psf	Minimum 15/32" APA Rated Plywood	Two fasteners at 12" on center

Installation:

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

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt must be used. The underlayment must comply with one of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The felt must be installed with minimum 2" side laps and minimum 2" end laps. The felt must be installed in accordance with the manufacturer's installation instructions, the IRC, and the IBC.

Attachment of Steel Roofing Panels to the Wood Deck: The steel roofing panels must be secured to the wood deck with 6" long, 16-gauge, Grade 50 steel, one-piece, low fixed clips. Each clip is secured to the wood deck with the following:

Systems 1 and 3: Two (2) #12-11 x 1" GP Pancake screws with no washers manufactured by Triangle Fastener Corporation. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the wood deck.

System 2: Two (2) #14-10 x 2" Panel-Tite HWH Type S screws with no washers manufactured by Triangle Fastener Corporation. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the wood 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 the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.