

Product Evaluation

RC655 | 0521

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-655

Effective Date: May 1, 2021

Re-evaluation Date: May 2025

Product Name: Thin-Seam 100 Steel Standing Seam Roof Panels Installed Over Plywood Deck

Manufacturer: Hilco Metal Roofing Supply
12503 Highway 6
Navasota, TX 77868
(936) 825-0500

General Description:

The Thin-Seam 100 roof panels are minimum 24-gauge galvalume steel standing seam roof panels with an optional paint finish. The roof panels have a maximum 18" of coverage. The roof panels have a 1" tall mechanical double lock standing seam rib. The roof panels are manufactured from minimum 24-gauge steel that conform to ASTM A792, AZ55, Grade 50 with a yield strength of 50,000 psi. The panels must be formed within the panel rollformer specifications and tolerances. The rollformer is a Panel Rollformer New Tech Machinery Corp., SS100 Profile.

Limitations:

Roof Deck: Install the roof panels over a minimum 15/32" thick plywood structural panel 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 resistance must be as specified in Table 1.

Table 1: Minimum 24-gauge Thin-Seam 100 Roof Panels Secured to Minimum 15/32" Plywood

Panel Clip Spacing	Design Wind Pressure (psf)
18" on center	-93.5
15" on center	-104.8
12" on center	-116.0
9" on center	-127.3
6" on center	-138.5

Roof Slope: The roof panels may be installed on roofs with a roof slope as low as 2:12 if sealant is used on the panel side laps. If sealant is not used on the panel side laps, then the minimum roof slope is 3:12.

Installation over Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing or roll roofing applied over an existing solid roof deck of minimum 15/32" plywood. Note: inspection of existing roof deck must be made prior to the installation of the roof panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before roof panel installation can begin.

Installation:

General: Install the steel roofing panels in accordance with the manufacturer's installation instructions and this production evaluation.

Roof Framing Members: Space the roof framing members a maximum of 24" on center.

Underlayment: Use a minimum of one layer of No. 30 (Type II) asphalt felt. The underlayment must comply with one or more of the following: ASTM D 226, ASTM D 4869 or ASTM D 1970. Install the underlayment with 6" side laps and 3" end laps. Apply the underlayment with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions and the IRC and the IBC.

Attachment of Roof Panels to the Wood Deck: The steel roof panels must be secured to the wood deck using a fixed clip (one piece, 0.0115" thick, 30-gauge, 33 ksi galvanized steel, 1-7/16" long) with two (2) No. 10-9 x 1" long Pancake Type 17 screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: if the metal roof panels are installed over an existing roof covering, then the fastener length must be increased so that the fasteners are long enough to ensure a minimum penetration of 1/4" below the existing roof deck). The maximum allowable spacing of the clips is specified in Table 1.

Panel Seam: The panel is seamed to a 180-degree seam (double lock) with a mechanical seamer.

Panel Ends and Edges: As required by the manufacturer.

Trims, Closures, and Accessories: Components, such as 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. All fasteners must be corrosion resistant as specified in the IRC and the IBC.