

Product Evaluation

RC653 | 0823

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-653

Effective Date: August 1, 2023

Re-evaluation Date: August 2027

Product Name: 1.5" Nail Strip Concealed Wide High (CWH) Snap Lock Steel Standing Seam Roof Panels Installed Over Plywood Deck

Manufacturer: Mueller, Inc.
1915 Hutchins Avenue
Ballinger, TX 76821
(800) 527-1087

General Description:

The 1.5" Nail Strip Concealed Wide High (CWH) Snap Lock Steel Standing Seam Roof Panels is a minimum 24-gauge steel panel. The panel has a 1-1/2" leg height. The panels have a maximum coverage of 16".

Limitations:

Roof Deck: Install the roof panels over a minimum 15/32" thick plywood deck.

New Roof Deck Attachment: The roof deck must meet or exceed the uplift requirements of IRC or the IBC.

Design Wind Pressures: For installations to minimum 15/32" thick plywood structural panel deck, Table 1 specifies the design wind pressure limitations.

Table 1: Minimum 24-gauge 1.5" Nail Strip Concealed Wide High (CWH) Snap Lock Steel Standing Seam Panels to Minimum 15/32" Plywood

Assembly	Design Wind Pressure (psf)
1	-78.5
2	-116.0

Roof Slope: The roof panels may be installed on roofs with a roof slope as low as 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 roof 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: A minimum of one layer of No. 30 felt or better must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970, and for synthetic underlayment, ASTM D 8257, AC 48, AC160, or AC 188. The underlayment must be installed following manufacturer's guidelines for side and end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Roof Panels to Plywood Deck:

Assembly 1: The panels are secured to the deck with No. 12-11 x 1" long, Type A pancake head screws. The fasteners are placed in the nail strip, one (1) fastener at each location, spaced a maximum of 11" on center. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If the 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 plywood roof decking).

Assembly 2: The panels are secured to the deck with No. 12-11 x 1" long, Type A pancake head screws. The fasteners are placed in the nail strip, one (1) fastener at each location, spaced a maximum of 6-3/4" on center. In addition, the panels are secured to the deck with No. 10-11 x 1" Eclipse head fasteners. The fasteners are placed in the pan, two (2) fasteners at each location, spaced a maximum of 12" on center. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If the 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 plywood roof decking).

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.