

Product Evaluation

RC493 | 0720

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-493

Effective Date: July 1, 2020

Re-evaluation Date: July 2024

Product Name: 1-3/4" Snap Lock 24-Gauge Steel Roofing Panels Installed over Wood Structural Panel Roof Decks

Manufacturer: Mueller, Inc.
Metal Roofing, Roofing and Components
1913 Hutchins Avenue
Ballinger, TX 76821
(800) 527-1087

General Description:

The 1-3/4" Snap Lock metal roofing panel are minimum 24-gauge galvalume steel panels with an optional paint finish. The metal roofing panels have a maximum coverage of 14-3/4". The panel has a 1-3/4" tall snap lock standing seam rib. The 24-gauge steel material is ASTM A792 AZ55, Grade 50, with a minimum 50 ksi yield point with optional painted finishes. Panels are made by using a Schleich Quadro-Plus Rollformer.

Limitations:

Roof Decking: The 1-3/4" Snap Lock metal roofing panels must be installed over either minimum 7/16" OSB or 15/32" plywood roof decks.

New Roof Deck Attachment: The roof deck must meet or exceed the uplift requirements of the IRC or IBC and must be installed in a manner to resist wind loads as required.

Design Wind Pressures: The design pressure uplift load resistance must be as specified in Table 1 and Table 2.

Roof Slope: The metal roofing panels must not be installed on roofs with a roof slope less than 3:12.

TABLE 1 Attachment of Minimum 24-gauge 1-3/4" Snap Lock Steel Roof Panels to Minimum 7/16" OSB Decks.

Design Wind Pressure (psf)	Panel Gauge	Clip Fastener	Panel Clip Spacing
-41.7	24-Ga. Steel	Two #10-12 Type A	24"
-52.5	24-Ga. Steel	Two #10-12 Type A	12"

Table 2 Attachment of Minimum 24-gauge 1-3/4" Snap Lock Steel Roof Panels to Minimum 15/32" Plywood Decks.

Design Wind Pressure (psf)	Panel Gauge	Clip Fastener	Panel Clip Spacing
-41.7	24-Ga. Steel	Two #10-12 Type A	24"
-52.5	24-Ga. Steel	Two #10-12 Type A	12"

Installation over an 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 7/16" OSB or 15/32" plywood. Inspection of the 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 the metal roofing panel installation proceeds. **NOTE:** Underlayment is not required to be installed.

Installation:

General: The 1-3/4" Snap Lock metal roof panels must be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Panels: The metal roof panels must be secured to the roof covering as specified in Table 1 and Table 2 and in accordance with this section.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt or equivalent must be used between the panel and the roof deck. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed with 6" side laps and 3" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Metal Roof Panels to the Roof Deck: The 1-3/4" Snap Lock metal roof panels must be secured to the roof deck as follows:

Roof Panels to OSB or Plywood Deck: The panels must be installed using a fixed clip with two (2) No. 10-12 x 1" long Pancake Type A. 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 required size and quantity of fasteners as well as the maximum allowable spacing of the fasteners is specified in Table 1 and Table 2.

Panel Clip: One-piece, fixed clip. 18-gauge x 3-1/2" long, galvanized steel.

Panel Seam: The panel is a snap lock seam.

Panel Ends and Edges: As required by the manufacturer.

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.

Alternative Fasteners: Alternative fasteners of equal or greater strength may be substituted.

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.