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Product Evaluation

RC664 | 0621

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-664

Effective Date: June 1, 2021
Re-evaluation Date: June 2025

Product Name: 138T Aluminum Standing Seam Roofing Panels Installed over a Plywood Deck

Manufacturer: McElroy Metal, Inc.
P.O. Box 1148
Shreveport, LA 71163
(318) 747-8000

Distributed By: McElroy Metal, Inc.
Metal Mart

General Description:
The 138T standing seam roofing panels are a minimum 0.040" aluminum panels. The panel is 15-7/8" in width with an actual coverage of 16". The panels have a 1-3/8" tall seam height. The panels conform to ASTM B209 3003 H14 with a minimum yield strength of 17 ksi. The panels are mechanically seamed together.

Limitations:
Roof Framing: The roofing panels must be installed over a minimum 5/8" plywood roof deck. All plywood butt joints are to be sealed with caulk or with one-part urethane sealant.

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 Table 1.

Table 1:
Attachment of 138T 0.040" Aluminum Roofing Panels to a Minimum 5/8" Plywood Roof Deck

Panel Clip Spacing	Design Wind Pressure (psf)
36" on center	-71.0
6" on center	-146.0

Roof Slope: The roof panels must be installed on roofs with a roof slope not less than 1:12.

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 nominal 5/8" plywood (minimum). Note: 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 roof panels before the roof panel installation proceeds.

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: 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 Plywood Deck: The panels are secured to the deck with one-piece, 16-gauge G90 galvanized steel fixed standard clips. Each clip is secured to the roof deck using two (2) No. 10-12 x 1" long, No. 2, Pancake head low profile, Type A drill point screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. Clips are spaced as specified in Table 1. (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 installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.