

## Product Evaluation

RC373 | 0820

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-373

**Effective Date:** August 1, 2020

**Re-evaluation Date:** August 2024

**Product Name:** 24-Gauge ML-150 Standing Seam Steel Roofing Panels Installed Over a Plywood Deck

**Manufacturer:** Northwest Roof Tile & Metal LLC  
6846 Theall Road  
Suite 400  
Houston, TX 77066  
(281) 893-8382

### General Description:

The ML-150 metal roofing panel is minimum 24-gauge galvalume steel panels with an optional paint finish. The metal roofing panels have a maximum coverage of 16". The panel has a 1-1/2" tall mechanical double lock standing seam rib. The metal roofing panels conform to ASTM A792, AZ 55, Grade 50, with a 50 ksi yield point with optional paint finishes. The metal roofing panels must be formed within the panel rollformer specifications and tolerances.

**Panel Rollformer:** Schleich Quadro-Plus Rollformer  
Metalforming, Inc.  
100 International Drive  
Peachtree City, Georgia 30269

**Limitations:**

**Roof Deck:** The metal roofing panels must be installed over a minimum 15/32" plywood deck.

**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 wind uplift pressure load resistance must be as specified in Table 1.

**Roof Slope:** The metal roof panels may be installed on roofs with a roof slope as low as 2:12.

**Table 1** Attachment of Minimum 24-gauge ML-150 Standing Seam Steel Roofing Panels to Minimum 15/32" Plywood Deck

Design Wind Pressure (psf)	Panel Seam	Panel Clip	Clip Spacing	Clip Fastener
-59.8	Double Lock	Sliding Clip	24" o.c.	(2) #12-11
-123.5	Double Lock	Sliding Clip	6" o.c.	(2) #12-11

**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 15/32" thick plywood. 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. NOTE: Underlayment is not required to be installed.

**Installation:**

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

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

**Underlayment:** For installations over a solid deck, a minimum of one layer of No. 30 (Type II) asphalt felt or equivalent 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. The underlayment must be installed in accordance with the requirements in the IRC and IBC. 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 Roof Deck:** The metal roof panels must be secured to the roof deck as follows:

**Roof Panels to Wood Structural Deck:** The panels must be installed using a sliding clip with two (2) No. 12-11 x 1" long Pancake A type screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If the metal roofing 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 deck.) The required size and quantity of fasteners as well as the maximum allowable spacing of the fasteners are specified in Table 1.

**Panel Clip:** Two-piece sliding clip is comprised of a 22-gauge x 4.18" long galvanized steel top, 16-gauge x 1.88" long galvanized steel base. The clip is manufactured by SFS Intec, Inc.

**Alternative Fasteners:** Substitution of equivalent fasteners must meet the following requirements:

No 12-11 x 1" Type A Pancake head, manufactured by ITW Buildex  
Ultimate withdrawal (pullout)  $\geq$  377 lbs in 15/32" plywood.

**Trims, Closures and Accessories:** Components such as the eave trim, rake trim, ridge trim, hip trim and valley trim must be installed in accordance with the manufacturer's installation instructions.

**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.