

Product Evaluation

RC583 | 0623

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-583

Effective Date: June 1, 2023

Re-evaluation Date: June 2027

Product Name: ML100 Steel Standing Seam Roofing Panels Installed over a Plywood Deck

Manufacturer: Quality Metals
2707 Castroville Rd
San Antonio, TX 78237
(210) 227-7276

General Description:

The ML100 panel is a mechanical lock, 1" standing seam metal roofing panel. The panel is minimum 24-gauge steel with an optional paint finish. The metal roofing panels have a maximum coverage of 17". The panel has a 1" rib height. The 24-gauge steel material is ASTM A 792 AZ55, Grade 50, with a 60 ksi yield point.

This product evaluation report is for metal roofing panels that are secured to a nominal 5/8" plywood deck. A thicker plywood deck may be used; however, the design pressure rating for the metal panels will be as specified in this evaluation report.

Limitations

Roof Deck: The metal roofing panels must be installed over a minimum 5/8" plywood deck.

New Roof Deck Attachment: The roof deck must meet or exceed the uplift requirements of the IRC or the IBC and must be as required for resistance for wind loads.

Roof Slope: The standing seam metal roofing panels may be installed on roofs with a roof slope as low as 1/2:12.

Design Pressure: The design pressure uplift load resistance must be as specified in Table 1.

Table 1. Attachment of ML100 Metal Roofing Panels to Minimum 5/8" Plywood Deck.

Design Uplift Pressure (psf)	Panel Clip	Clip Spacing	Clip Fastener
-52.5	Fixed Clip	24" o.c.	Two No. 10-12 x 1"

Installation over Existing Roof Covering: Not permitted.

Installation Instructions:

General Installation Requirements: The metal roofing panels must be installed in accordance with the manufacturer's installation instructions and this product evaluation.

Underlayment: 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 with minimum 2" side laps and 2" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instruction. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Metal Roof Panels to Plywood Deck: The panels must be installed using a fixed clip (one-piece; 24-gauge galvanized steel; 2" long x 1-1/4" tall) with two No. 10-12 x 1" long No. 2 Phillips drive, bugle head steel screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. The maximum allowable spacing of the clips is specified in Table 1.

Panel Ends: As required by the manufacturer.

Panel Edges: As required by the manufacturer.

Trims, Closures and Accessories: Components such as eave, rake rim, rake trim, hip trim, and valley trim shall be 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.