

Product Evaluation

RC585 | 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-585

Effective Date: June 1, 2023

Re-evaluation Date: June 2027

Product Name: ML300 Steel Standing Seam Roofing Panels Installed over Steel Purlins

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

General Description:

The ML300 panel is a mechanical lock, 3" trapezoid 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 24". The panel has a 3" rib height. The 24-gauge steel material is ASTM A 792 AZ55, Grade 50, with a 50 ksi yield point.

Limitations

Roof Framing: The ML300 metal roof panels must be installed over open steel purlins.

New Roof Deck Attachment: The roof framing 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 ML300 standing seam roofing panels to minimum 16-gauge steel purlins.

Design Uplift Pressure (psf)	Purlins	Panel Clip	Clip Spacing	Clip Fastener
-36.4	Minimum 16-gauge 5'-0" on center	Floating Clip	60" o.c.	Two 1/4-14 x 1-1/4"

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: N/A.

Purlins: The ML300 standing seam metal roof panels must be secured to the 16-gauge steel purlins as specified in Table 1 and in this section.

Attachment of Metal Roof Panels to Plywood Deck: The panels must be installed using a floating clip (G90 galvanized steel; 50 ksi; 0.037" top; G90 galvanized steel; 50 ksi; 0.064" base; 3" tall) with two 1/4-14 x 1-1/4" long HWH self-driller screws. The fasteners must be long enough to ensure a minimum penetration of 3 pitches below the steel purlin. The maximum allowable spacing of the clips is specified in Table 1.

Panel Seam: The panel rib is mechanically seamed with a double lock.

Panel Ends: As required by the manufacturer.

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