TDI | Texas Department of Insurance

Product Evaluation

RC585 | 0623

Engineering Services Program

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.