TDI | Texas Department of Insurance

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Product Evaluation

RC418 | 0322

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-418

Effective Date: March 1, 2022
Re-evaluation Date: March 2026

Product Name: 2" Mueller Lock (MLK) Steel Roofing Panels Installed Over Steel Purlins

Manufacturer: Mueller, Inc.
Metal Buildings, Roofing, and Components
1913 Hutchins Avenue
Ballinger, TX 76821
(800) 231-1034 ext. 8155

Product Description:
The 2" Mueller Lock (MLK) panel is minimum 24-gauge galvalume steel with an optional paint finish. The steel roofing panels have 16" of coverage. The panel has a 2" tall mechanical double lock standing seam rib. The 24-gauge steel material conforms to ASTM A 792 AZ55, Grade 50, with a 50 ksi yield point with optional painted finishes. Form panels within the panel rollformer specifications and tolerances.

Panel Rollformer: Schlebach Quadro-Plus Rollformer
Metalforming, Inc.
100 International Drive
Peachtree City, GA 30269

Limitations:
Roof Framing: Install the steel roofing panels over open steel purlins. For purlins, use minimum 16-gauge steel.

New Roof Framing Attachment: The roof framing must meet or exceed the uplift requirements of the IRC or IBC and installed as required for resistance to wind loads.

Design Wind Pressures: Use the design pressure uplift load resistance specifications in Table 1.

Roof Slope: Install the steel roofing panels on roofs with a roof slope as low as 1/2:12 if using sealant on the panel side laps. If not using sealant on the panel side laps, then the minimum roof slope is 3:12.

Installation Over an Existing Roof Covering: Not permitted.

Table 1. Attachment of 2" Mueller Lock (MLK) Steel Roofing Panels to Steel Purlins

Design Wind Pressure (psf)	Panel Clip Spacing
-155.0	1'-0" on center
-141.3	1'-6" on center
-127.5	2'-0" on center
-113.8	2'-6" on center
-100.0	3'-0" on center
-86.3	3'-6" on center
-72.5	4'-0" on center
-58.8	4'-6" on center
-45.0	5'-0" on center

Installation Instructions:
General: Install the metal roofing panels in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Steel Purlins: Use minimum 16-gauge steel purlins. Table 1 specifies the maximum spacing of the purlins.

Underlayment: N/A

Attachment of Steel Roofing Panels to the Steel Purlins: Secure the steel roofing panels to the roof using sliding panel clips with two (2) No. 1/4-14 HWH Self Driller fasteners per clip. Use fasteners long enough to ensure a minimum penetration of three pitches of thread below the steel purlin.

Panel Clip: Two-piece sliding clip (clip base and clip tab); 3" tall; 4.30" long; 0.031" thick; G90 galvanized steel; NC-33014-3 by Login Stamping, Inc.

Panel Seam: The panel is seamed to a 180-degree seam (double lock) with a mechanical seamer.

Panel Ends and Edges: Install panel ends and edges as required by the manufacturer.

Trims, Closures, and Accessories: Install components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim as required by the manufacturer.

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.