

Product Evaluation

RC443 | 0519

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-443

Effective Date: May 1, 2019

Re-evaluation Date: May 2023

Product Name: 1.5" Aluminum Mechanical Lock Standing Seam Roof Panels Installed Over a Plywood Deck

Manufacturer: River City Roofing & Remodeling, Inc.
602 Everest Street
San Antonio, TX 78209
(210) 828-2739

General Description:

The 1.5" aluminum mechanical lock roofing panels have a maximum coverage of 16". The panels have a 1-1/2" tall rib. The panels are manufactured from 0.032" coated aluminum and conform to ASTM B 209. Panels must be formed within the panel rollformer specifications and tolerances.

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

Limitations:

Roof Deck: The metal roofing panels must be installed over a minimum 15/32" plywood deck. Roof framing must not exceed 24" on center.

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

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

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

Table 1: Attachment of 1.5" Aluminum Mechanical Lock Roof Panels to Minimum 15/32" Plywood

Design Wind Pressure (psf)	Panel Seam	Panel Clip	Panel Clip Fasteners	Panel Clip Spacing
-78.5	Double Lock	1500SS Stainless Steel Sliding Clip	Two (2), No. 14-13 x 1-1/2" DP1	18" on center
-86.0	Double Lock	1500SS Stainless Steel Sliding Clip	Two (2), No. 14-13 x 1-1/2" DP1	12" on center
-93.5	Double Lock	1500SS Stainless Steel Sliding Clip	Two (2), No. 14-13 x 1-1/2" DP1	6" on center

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. The existing roof deck must be minimum 15/32" plywood. Note: Inspection of the existing roof deck must be made before installing the roof panels. The condition of the existing roof deck must be acceptable to receive the roof panels before the roof panel installation can proceed.

Installation:

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

Panels: Attach panels in accordance with the installation details in Table 1.

Underlayment: Use a minimum of one layer of No. 30 (Type II) asphalt felt. Use underlayment that complies with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. Apply the underlayment with corrosion resistant fasteners in accordance with the manufacturer's installation instructions and the IRC or the IBC. Fasteners must be applied along the overlaps not farther than 36 inches on center.

Attachment of Metal Roofing Panels to the Roof Deck: Secure the metal roofing panels to the wood roof deck in accordance with Table 1. Use fasteners long enough to penetrate a minimum of 1/4" below the roof deck. Note: If installing metal roofing panels over an existing roof covering, then increase the fastener length so that they penetrate a minimum of 1/4" below the roof deck. Table 1 specifies the spacing of the clips.

Panel Clip: 1500SS stainless steel two-piece floating clip. 26-gauge stainless steel top, 4.3" long; 16-gauge stainless steel base; 2" height.

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

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.

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

No. 14-13 x 1-1/2" DP1 Concealor

Ultimate withdrawal (pullout) \geq 407 lbs. in minimum 15/32" plywood

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.