

Product Evaluation

RC609 | 0719

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-609

Effective Date: July 2019

Re-evaluation Date: July 2023

Product Name: 1-1/2" Acadian Z-Lock Steel Roofing Panel Installed over a Plywood Deck

Manufacturer: Acadian Roofing
1499 N. Post Oak Road
Suite 119
Houston, TX 77055
(713)463-7663

General Description:

The 1-1/2" Acadian Z-Lock Metal roof panel is minimum 24-gauge galvalume steel panels with an optional paint finish. The metal roofing panels have a maximum coverage of 17". The panel has a 1-1/2" tall snap lock rib. The 24-gauge steel material is ASTM A792 Grade 50 with optional painted finishes. The panels must be formed within the panel roll former specifications and tolerances. Panel roll former: Zimmerman SL-1500 mobile roll former SN #1216697.

This product evaluation report is for residential metal roofing panels that are secured to nominal 19/32" plywood deck. A thicker plywood deck may be used; however, the design pressure rating for the metal panels must be as specified in the report.

Limitations:

Roof Deck: The metal roofing panels must be installed over minimum 19/32" 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 metal roofing panels may be installed on roofs with a roof slope as low as 3:12.

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

Installation over 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 applied over an existing solid roof deck of minimum 19/32" plywood. Note: Inspection of existing roof deck must be made prior to the installation of the roof panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before roof panel installation can begin.

Table 1. Attachment of 1-1/2" Acadian Z-Lock 24-Gauge Metal Roofing Panels to minimum 19/32" Plywood Deck

| Design Wind Pressure | Panel Seam | Panel Clip | Clip Spacing | Clip Fastener |
|----------------------|------------|------------|--------------|--|
| -63.5 psf | Snap Lock | Fixed Clip | 12" o.c. | No. 10-13 x 1" long pancake head GP point fastener |

Installation Instructions:

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

Roof Deck: Minimum 19/32" plywood.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt or equivalent shall be used. The underlayment used must comply with one or more of the following standards: ASTM D226; ASTM D4869; or ASTM D1970.

Attachment of Metal Roof Panels to the Plywood Deck: The 24-gauge Acadian Z-Lock panels must be installed using a fixed clip with two (2) No. 10-13 x 1" long GP Pancake head screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length must be increased so that the fasteners are long enough to ensure a minimum penetration of 1/4" below the existing plywood roof deck.). The maximum allowable spacing of the clips is specified in Table 1.

Panel Clip: 24-Gauge galvanized steel, 33 ksi steel clip, fixed clip, 0.023" nominal thickness, 3" long.

Panel ends: As required by the manufacturer.

Panel edges: As required by the manufacturer.

Panel Seam: The panel is a snap lock seam.

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 the same diameter that have 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, the IBC, and the Texas Revisions.