

Product Evaluation

RC672 | 0723

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-672

Effective Date: July 1, 2023

Re-evaluation Date: July 2027

Product Name: 1.5" LH Steel Standing Seam Roofing Panel Installed over a Plywood Roof Deck

Manufacturer: Leo Sheet Metal Roofing
1031 Coen Road
Rosharon, TX 77583
(281) 667-8068

General Description:

The 1.5" Standing Seam Roof panel is a minimum 24-gauge galvalume steel panels with an optional paint finish. The roofing panels have a maximum coverage of 17". The panel has a 1-1/2" tall mechanical double lock standing seam rib. The 24-gauge steel material is ASTM A 792 Grade 50, with a 50 ksi yield point. Panels must be formed within the panel rollformer specifications and tolerances. Panel Rollformer: Knudson VP-21M.

This product evaluation report is for residential steel roofing panels that are secured to a nominal 15/32" plywood roof deck. A thicker plywood roof deck may be used; however; the design pressure rating for the steel panels will be as specified in this evaluation report.

Limitations:

Roof Deck: The roofing panels must be installed over a solid minimum 15/32" plywood roof 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 roofing panels may be installed on roofs with a roof slope as low as 1:12.

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

Table 1. Attachment of 1.5" LH Steel Roofing Panels to Minimum 15/32" Plywood Roof Deck.

Design Uplift Pressure (psf)	Panel Seam	Panel Clip	Clip Spacing	Clip Fastener
-108.5	Double Lock	Fixed Clip	12" o.c.	Two (2) #12-11
-121.0	Double Lock	Fixed Clip	10" o.c.	Two (2) #12-11
-146.0	Double Lock	Fixed Clip	6" o.c.	Two (2) #12-11

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 15/32" 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.

Installation:

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

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt or equivalent must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed with 6" side laps and 3" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instruction. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Steel Roofing Panels to Plywood Deck: The 24-gauge steel panels must be installed using a fixed clip (one-piece, 24-gauge galvanized steel, 2" long) with two (2) No. 12-11 x 1-1/4" long, Type 17 point, #2 Phillips, Pancake head fasteners. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. The maximum allowable spacing of the clips is specified in Table 1.

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

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 shall be 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.