

Product Evaluation

RC739 | 1123

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-739

Effective Date: November 1, 2023

Re-evaluation Date: November 2027

Product Name: TBTC-150 Aluminum Standing Seam Roof Panels Installed Over Plywood Deck

Manufacturer: TBTC Roofing & Construction
5901 Leopard Street Suite B
Corpus Christi, Texas 78409
(361) 557-3034

General Description:

The TBTC-150 Mechanical 1.5" Aluminum Standing Seam Roof panel is minimum 0.032" Aluminum with an optional paint finish. The metal roofing panel has a maximum coverage of 16-1/8". The panel has a 1-1/2" tall mechanical double lock standing seam rib. The Aluminum is 0.032" ASTM B209 with optional painted finishes. Panels must be formed within the panel rollformer specifications and tolerances. Panel Rollformer: New Tech Machinery Corporation SS150 profile

This product evaluation report is for Residential metal roofing panels that are secured to nominal 19/32" plywood deck. Thicker plywood deck may be used; however; the design pressure rating for the metal panels shall be as specified in this evaluation report.

Limitations:

Roof Deck: The aluminum roofing panels must be installed over a minimum 19/32" plywood deck. Roof framing must not exceed 24" on center.

New Roof Deck Attachment: The roof framing must meet or exceed the uplift requirements of the IRC or IBC and must be installed in a manner to resist wind loads as required.

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

Roof Slope: The roof panels may be installed on roofs with a roof slope as low as 1/4:12 if sealant is used on the panel side laps. If sealant is not used on the panel side laps, then the minimum roof slope is 3:12.

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 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 Aluminum Standing Seam Roofing panels over minimum 19/32" plywood.

Design Wind Pressure (psf)	Panel Seam	Panel Clip	Panel Clip Fasteners	Clip Spacing
-93.5	Double Lock	Fixed Clip	(2) #10-9	12" on center

Installation:

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

Underlayment:

A minimum one layer of No. 30 (Type II) asphalt felt must be used. The underlayment used shall comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. Install the underlayment with 6" side laps and 3" end laps. Apply the underlayment with corrosion resistant fasteners in accordance with the manufacturer's installation instructions and the IRC and the IBC.

Attachment of Metal Panels to the Plywood Deck:

The panels shall be installed using a fixed clip (one-piece, 26-gauge Stainless steel, 2" long) with (2) No. 10-9 x 1" long Stainless Pancake Type 17 point. The fasteners shall be long enough to ensure a minimum penetration of " below the roof deck. The maximum allowable spacing of the clips is specified in Table 1.

Panel Seam: The panel is seamed at 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 the eave trim, rake trim, ridge trim, hip trim, and valley trim must be installed 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.