

Product Evaluation

RC565 | 0222

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-565

Effective Date: February 1, 2022

Re-evaluation Date: February 2026

Product Name: Hi-Tech 24" Wide Steel Standing Seam Roof Panels Installed Over Steel Purlins

Manufacturer: Rigid Global Buildings
18933 Aldine Westfield
Houston, TX 77073
(281) 443-9065

General Description:

The Hi-Tech metal roofing panels are steel standing seam roofing panels. The steel roofing panels have a maximum 24" of coverage. The steel roofing panels have a 3" rib height and a mechanically seamed side lap. The steel roofing panels are manufactured from either 24-gauge or 22-gauge Galvalume coated steel that conform to ASTM A792, ASTM A755, or ASTM A653 Grade 50 with a minimum yield strength of 50,000 psi. The steel roofing panels can be supplied painted with an optional paint finish.

Limitations:

Roof Framing: The steel roofing panels must be installed over minimum 16-gauge steel purlins.

New Roof Framing 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.

Design Wind Pressures: The design pressure uplift load resistance must be as specified in Table 1 and Table 3 for panels mechanically seamed with the Triple-Lok Seam System and as specified in Table 2 and Table 4 for panels mechanically seamed with the Quad-Lok Seam System.

Roof Slope: The steel roofing panels may be installed on roofs with a roof slope as low as 1/4:12.

Table 1

Attachment of Hi-Tech 24" Wide, Minimum 24-gauge Steel Standing Seam Roofing Panels to Steel Purlins with the Triple-Lok System

Design Wind Pressure	Purlins	Attachment of Panel to Steel Purlins
-36.0 psf	Minimum 16-gauge; 5'-0" on center	Clips with Two Fasteners
-45.0 psf	Minimum 16-gauge; 4'-6" on center	Clips with Two Fasteners
-54.0 psf	Minimum 16-gauge; 4'-0" on center	Clips with Two Fasteners
-63.0 psf	Minimum 16-gauge; 3'-6" on center	Clips with Two Fasteners
-72.0 psf	Minimum 16-gauge; 3'-0" on center	Clips with Two Fasteners
-81.0 psf	Minimum 16-gauge; 2'-6" on center	Clips with Two Fasteners
-90.0 psf	Minimum 16-gauge; 2'-0" on center	Clips with Two Fasteners

Table 2

Attachment of Hi-Tech 24" Wide, Minimum 24-gauge Steel Standing Seam Roofing Panels to Steel Purlins with the Quad-Lok System

Design Wind Pressure	Purlins	Attachment of Panel to Steel Purlins
-45.0 psf	Minimum 16-gauge; 5'-0" on center	Clips with Two Fasteners
-57.5 psf	Minimum 16-gauge; 4'-6" on center	Clips with Two Fasteners
-70.0 psf	Minimum 16-gauge; 4'-0" on center	Clips with Two Fasteners
-82.5 psf	Minimum 16-gauge; 3'-6" on center	Clips with Two Fasteners
-95.0 psf	Minimum 16-gauge; 3'-0" on center	Clips with Two Fasteners
-107.5 psf	Minimum 16-gauge; 2'-6" on center	Clips with Two Fasteners
-120.0 psf	Minimum 16-gauge; 2'-0" on center	Clips with Two Fasteners

Table 3

Attachment of Hi-Tech 24" Wide, Minimum 22-gauge Steel Standing Seam Roofing Panels to Steel Purlins with the Triple-Lok System

Design Wind Pressure	Purlins	Attachment of Panel to Steel Purlins
-44.0 psf	Minimum 16-gauge; 5'-0" on center	Clips with Two Fasteners
-57.1 psf	Minimum 16-gauge; 4'-6" on center	Clips with Two Fasteners
-70.2 psf	Minimum 16-gauge; 4'-0" on center	Clips with Two Fasteners
-83.3 psf	Minimum 16-gauge; 3'-6" on center	Clips with Two Fasteners
-96.3 psf	Minimum 16-gauge; 3'-0" on center	Clips with Two Fasteners
-109.4 psf	Minimum 16-gauge; 2'-6" on center	Clips with Two Fasteners
-122.5 psf	Minimum 16-gauge; 2'-0" on center	Clips with Two Fasteners

Table 4

Attachment of Hi-Tech 24" Wide, Minimum 22-gauge Steel Standing Seam Roofing Panels to Steel Purlins with the Quad-Lok System

Design Wind Pressure	Purlins	Attachment of Panel to Steel Purlins
-56.0 psf	Minimum 16-gauge; 5'-0" on center	Clips with Three Fasteners
-72.9 psf	Minimum 16-gauge; 4'-6" on center	Clips with Three Fasteners
-89.8 psf	Minimum 16-gauge; 4'-0" on center	Clips with Three Fasteners
-106.7 psf	Minimum 16-gauge; 3'-6" on center	Clips with Three Fasteners
-123.7 psf	Minimum 16-gauge; 3'-0" on center	Clips with Three Fasteners
-140.6 psf	Minimum 16-gauge; 2'-6" on center	Clips with Three Fasteners
-157.5 psf	Minimum 16-gauge; 2'-0" on center	Clips with Three Fasteners

Installation Over an Existing Roof Covering: Not permitted.

Installation:

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

Steel Purlins: The minimum thickness of the steel and the maximum spacing of the purlins must be as specified in Table 1, Table 2, Table 3, and Table 4.

Attachment of Steel Roofing Panels to the Steel Purlins: The metal roofing panels must be secured to the steel purlins with either MPS 602 or MPS 603 sliding clips (50 ksi, 22-gauge top, 16-gauge base, G90 galvanized) by Logan Stamping, Inc./BPD. For panels listed in Tables 1, 2, and 3, each clip is secured to the steel purlins with two 1/4-14 x 1-1/4" HWH SD3 fasteners. For panels listed in Table 4, each clip is secured to the steel purlins with three 1/4-14 x 1-1/4" HWH SD3 fasteners. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the purlins. The fasteners must be located at each steel purlin.

Panel Seam: Panels are seamed together mechanically along the sides with either a Triple-Lok seam or a Quad-Lok seam.

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.

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