

Product Evaluation

RC371 | 0820

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-371

Effective Date: August 1, 2020

Re-evaluation Date: August 2024

Product Name: 24-Gauge LT-175 Steel Standing Seam Roofing Panels Over a Steel Deck

Manufacturer: Northwest Roof Tile & Metal LLC
6846 Theall Road
Suite 400
Houston, TX 77066
(281) 893-8382

General Description:

The LT-175 metal roof panels are minimum 24-gauge galvalume steel panels with an optional paint finish. The metal roof panels have a maximum coverage of 17-3/4". The panel has a 1-3/4" snap lock standing seam rib. The metal roof panels conform to ASTM A792, AZ 55, Grade 50, with a 50 ksi yield point with optional paint finishes. The metal roof panels must be formed within the panel rollformer specifications and tolerances.

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

Limitations:

Roof Deck: The metal roof panels must be installed over a minimum 22-gauge B steel roof deck.

New Roof Deck Attachment: The roof deck 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 wind uplift pressure load resistance must be as specified in Table 1.

Roof Slope: The metal roof panels may be installed on roofs with a roof slope as low as 3:12.

Table 1 Attachment of Minimum 24-gauge LT-175 Steel Roof Panels to Minimum 22-gauge B Steel Deck

Design Wind Pressure (psf)	Panel Seam	Purlin Spacing	Panel Clip	Clip Spacing	Clip Fastener
-71.0	Snap Lock	5'-0" o.c.	20-gauge fixed	24" o.c.	(2) #14
-108.5	Snap Lock	2'-6" o.c.	20-gauge fixed	6" o.c.	(2) #14

Installation Over an Existing Roof Covering: Not permitted.

Installation:

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

Panels: The metal roof panels must be secured to the roof deck as specified in Table 1 and in accordance with this section.

Roof Framing Members: The steel deck must be attached to minimum 8 x 2.5Z16 steel purlins spaced in accordance with Table 1.

Structural Steel Deck: Minimum 22-gauge B coated steel deck with minimum yield strength of 33 ksi and minimum depth of 1-1/2" and a maximum pitch of 6".

Fire Barrier: Minimum 1/2" thick roof gypsum board with minimum 900 psi compressive strength.

Rigid Insulation: Minimum 1" thick polyiso rigid roof insulation with minimum 20 psi compressive strength.

Attachment of Metal Roof Panels to Roof Deck: The metal roof panels must be secured to the roof deck as follows:

Roof Panels to Steel Structural Deck: The panels must be installed using a minimum 20-gauge, 2-1/4" long, fixed clip, using minimum two (2) No. 14-13 Dekfast screws by SFS Intec, Inc. The fasteners must be long enough to ensure a minimum penetration of 3 pitches below the steel deck.

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

No 14-13 Dekfast Screw by SFS Intec, Inc.

Ultimate withdrawal (pullout) \geq 540 lbs in 22-gauge steel deck.

Panel Ends, End Laps and Edges: The panel ends, end laps and edges must be secured in accordance with the manufacturer's installation instructions.

Trims, Closures and Accessories: Components such as the eave trim, rake trim, ridge trim, hip trim and valley trim must be installed in accordance with the manufacturer's installation instructions.

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.