

Product Evaluation

RC719 | 0623

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-719

Effective Date: June 1, 2023

Re-evaluation Date: June 2027

Product Name: 275 New Lock Panel Installed Over Plywood Deck

Manufacturer: Select Management Systems, Inc.
DBA Superior Metal Services
17 Scenic Loop Road
Boerne, TX 78006
Phone: (830) 388-7640

General Description:

The 275 New Lock standing seam metal roof panels have 17.5" of coverage. The metal roof panels have a 2" rib height and an unseamed or a mechanical seamed side lap. The panels are manufactured from 24-gauge Galvalume coated steel that conform to ASTM A792, Grade 50, with a minimum yield strength of 50,000 psi. An optional paint finish is available. The panel rollformer is manufactured by New Tech Machinery Corp. with 275 Panel Profile.

This evaluation report is for residential steel roofing panels that are secured to nominal 15/32" plywood roof decks. Thicker plywood may be used; however, the design pressure rating for the metal panels must be as specified in this evaluation report.

Limitations:

Roof Decking: Install the metal roof panels with clips over a minimum 15/32" thick plywood wood structural panel decking.

New Roof Deck Attachment: The roof decking must meet or exceed the uplift requirements of the IRC or the IBC.

Design Wind Pressures: For installations to minimum 15/32" thick plywood wood structural panel roof decks, Tables 1 & 2 specifies the design wind pressure limitations.

Roof Slope: The metal roof panels may be installed on roofs with a roof slope as low as 1/2:12.

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 15/32" plywood. Note: Inspection of existing roof deck must be made prior to the installation of the roofing 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: Minimum 24-gauge Unseamed 275 New Lock Panels to Minimum 15/32" Plywood Deck.

Design Wind Pressure (psf)	Panel Clip Spacing
-56.0	2'-0" on center

Table 2: Minimum 24-gauge Seamed 275 New Lock Panels to Minimum 15/32" Plywood Deck

Design Wind Pressure (psf)	Panel Clip Spacing
-52.5	3'-0" on center
-66.5	2'-6" on center
-80.5	2'-0" on center
-94.5	1'-6" on center
-108.5	1'-0" on center

Installation:

General: Install the steel roofing panels in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Roof Framing Members: Space the roof-framing members at maximum of 24" on center.

Underlayment: Use a minimum of one layer of No. 30 (Type II) asphalt felt. The underlayment used must 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. The underlayment must be applied with corrosion resistant fasteners in accordance with the manufacturer's installation instructions, the IRC or the IBC.

Attachment of Metal Roof Panels to the Steel Purlins: The panels are secured to the deck with fixed clip using two #10-12 x 1" long, No. 2 Phillips Drive, Pancake head screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. Clips are spaced as specified in Tables 1 & 2. (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 decking).

Panel Clip: NCF-33000 fixed clips (3.25" wide, 2.05" tall, 22-gauge 50 ksi steel, G90 galvanized steel) by Logan Stamping, Inc.

Panel Seam: Adjacent panels are snapped together (Unseamed) or seamed together (Seamed) mechanically along the side laps with a mechanical seamer to a 90-degree seam.

Panel Ends and Edges: As required by manufacturer.

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 the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.