

## Product Evaluation

RC573 | 0722

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-573

**Effective Date:** July 1, 2022

**Re-evaluation Date:** July 2026

**Product Name:** Medallion-Lok Standing Seam Steel Roofing Panels Installed over Plywood Decks, Open Steel Framing, or Steel Roof Decks

**Manufacturer:** McElroy Metal, Inc.  
P.O. Box 1148  
Shreveport, LA 71163  
(318) 747-8000

**Distributed By:** McElroy Metal, Inc.  
Metal Mart

### General Description:

Medallion-Lok is a concealed fastener architectural standing seam roof panel. The panels are minimum 24-gauge steel. The panels have a maximum width of 18". The panels have a rib height of 1-3/4". The panels are installed using steel clips.

### Limitations:

**Roof Deck:** The steel roofing panels may be installed over the following type of roof decks:

- Minimum 19/32" (5/8" nominal) plywood roof decks. Roof framing a maximum of 24" o.c.
- Open frame steel purlins (minimum 16-gauge).
- Minimum 22-gauge steel roof decks.

**Table 1:** Attachment of Minimum 24-gauge Steel Roofing Panels Plywood Roof Deck

Design Wind Pressure (psf)	Panel Width	Panel Clip	Clip Spacing
54.2	16"	3-1/2" long 18-ga. galvanized	36" o.c.
71.5	16"	3-1/2" long 18-ga. galvanized	12" o.c.
52.5	18"	3-1/2" long 18-ga. galvanized	36" o.c.

**Table 2:** Attachment of Minimum 24-gauge Steel Roofing Panels to Steel Purlins.

Design Wind Pressure (psf)	Panel Width	Purlin Spacing	Panel Clip	Clip Spacing
30.0	16"/18"	5'-0"	3-1/2" long 18-ga. galvanized	60" o.c.
52.5	16"/18"	4'-0"	3-1/2" long 18-ga. galvanized	48" o.c.

**Table 3:** Attachment of Minimum 24-gauge Steel Roofing Panels to Steel Roof Deck.

Design Wind Pressure (psf)	Panel Width	Panel Clip	Clip Spacing
52.5	16"/18"	3-1/2" long 18-ga. galvanized	48" o.c.

**New Roof Deck Attachment:** The roof deck must meet or exceed the uplift requirements of the IRC or IBC. Install as required for resistance to wind loads.

**Design Wind Pressures:** Tables 1, 2, and 3 specify the design pressure uplift load resistance.

**Roof Slope:** Install the steel roofing panels on roofs with a roof slope as low as 3:12. Application of product on slopes less than 3:12 must be pre-approved by McElroy Metals, Inc.

**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: Inspect the existing roof deck prior to the installation of the roofing panels. The condition of the existing roof deck must be acceptable to receive the steel roofing panels before the steel roofing panel installation can proceed. **NOTE:** Does not require underlayment.

#### **Installation:**

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

**Panel Clips:** Minimum 18-gauge steel, One piece; 3-1/2" long; 1-7/8" high.

**Steel Purlins:** Minimum 16-gauge steel. Spacing specified in Table 2.

**Steel Deck:** Minimum 22-gauge steel.

**Bearing Plate:** One piece; minimum 18-gauge steel; 3-7/8" wide; 6" long. Must be used when rigid insulation is used.

**Rigid Insulation:** Minimum 1" thick; maximum 4" thick; 1.8-2 pcf density.

**Underlayment:** For installations over a solid plywood deck, use a minimum of one layer of No. 30 (Type II) asphalt felt or 40 mil high temperature peel and stick underlayment. Use an underlayment that complies with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. Install the underlayment per the manufacturer's installation instructions and as required by the IRC and the IBC.

**Attachment of Steel Roof Panels to the Roof Substrate:** Secure the steel roofing panels to the roof substrate as follows:

- **Roofing Panels Secured to Plywood Deck:** Fasteners used to attach panel clips to plywood deck when no rigid insulation is used to be minimum No. 10-12 x 1" long Pancake Head Type A. When rigid insulation is used, use minimum No. 12 Dekfast fasteners. A bearing plate must be used below the panel clip when rigid insulation is used. Use fasteners long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If installing the steel roofing panels over an existing roof covering, then increase the fastener length so that the fasteners are long enough to ensure a minimum penetration of 1/4" below the existing plywood roof deck). Table 1 specifies the required quantity of fasteners as well as the maximum allowable spacing of the panel clips.
- **Roofing Panels Secured to Steel Purlins:** Fasteners used to attach panel clips to purlins when no rigid insulation is used to be minimum 10-16 x 1" long, self-drilling, self-tapping, pancake head, No. 3-point, steel screws. When rigid insulation is used, fasteners must be minimum No. 14-13 DP-1 carbon, pancake head combination square/drive screws. A bearing plate must be used below the panel clip when rigid insulation is used. Fasteners must be long enough to extend a minimum of 3 pitches below the steel framing. Table 2 specifies the required quantity of fasteners as well as the maximum allowable spacing of the panel clips.
- **Roofing Panels Secured to Steel Deck:** A bearing plate must be used below the clips when installed over rigid insulation. Fasteners used to attach panel clips and bearing plates through rigid insulation and into steel deck must be minimum No. 14 diameter with Phillips or square drive head, self-drilling steel screws. Two screws per clip to be per clip, inserted through the

guide holes in the clip. Fasteners must be long enough to extend a minimum of 3 pitches below the steel deck.

**Trims, Closures, and Accessories:** Install components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim 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.