

## Product Evaluation

RC435 | 0220

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-435

**Effective Date:** February 1, 2020

**Re-evaluation Date:** February 2024

**Product Name:** DMC 175S 24-Gauge Steel Standing Seam Roofing Panels Installed Over a Steel Deck

**Manufacturer:** Drexel Metals Inc  
1234 Gardiner  
Louisville, KY 40213  
(888) 321-9630

### General Description:

This evaluation report is for the DMC 175S 24-gauge steel, preformed, standing seam metal roofing panels installed over a steel deck. The steel standing seam roofing panels have 18" of coverage. The standing seam metal roof panels have a 1.75" snap lock seam. The metal roofing panels are manufactured from 24-gauge galvalume steel, minimum Fy = 50 ksi min.

### Limitations:

**Roof Framing:** Install the metal roofing panels over a 22-gauge, 1.5" B-deck, Grade 80 ksi steel deck. Secure the steel deck to steel structural supports.

**New Roof Framing Attachment:** The roof framing must meet or exceed the uplift requirements of the IRC or IBC and installed as required for resistance to wind loads.

**Design Wind Pressures:** Table 1 specifies the design pressure uplift load resistance.

**Roof Slope:** Install the metal roofing panels on roofs with a roof slope as low as 2:12.

**Table 1.** DMC 175S 24-Gauge Steel Standing Seam Metal Roofing Panels Installed Over a Steel Deck

Design Wind Pressure	Structural Steel Supports	Steel Deck	Attachment of Panel to Steel Deck
-60 psf	Minimum ASTM A36 structural steel supports, minimum 0.25" thick top flange, spaced a maximum of 5'-0" o.c.	Min. 22-gauge, 1.5" B-deck, Grade 80 ksi	18-gauge, UL 90 clip with two (2), No. 14-13 x 5 inch truss head deck driller screws over an 18-gauge, 3" x 3" bearing plate. Space the clips a maximum of 36" o.c. along the panel seam.
-105 psf	Minimum ASTM A36 structural steel supports, minimum 0.25" thick top flange, spaced a maximum of 5'-0" o.c.	Min. 22-gauge, 1.5" B-deck, Grade 80 ksi	18-gauge, UL 90 clip with two (2), No. 14-13 x 5" truss head deck driller screws over an 18-gauge, 3" x 3" bearing plate. Space the clips a maximum of 6" o.c. along the panel seam.

**Installation:**

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

**Steel Supports:** Table 1 specifies the minimum thickness of the steel and the maximum spacing of the steel supports.

**Structural Steel Deck:** Minimum 22-gauge ASTM A653 steel "B" deck with a G90 galvanized coating. Secure the steel deck to the steel purlins with No. 12-24 HWH, DP5 screws with a 3/4" outer diameter washer at each flute. The deck laps are secure with 1/4" by 7/8" HWH screws spaced at 20" on center.

**Substrate:** Place one layer of 2" thick, minimum 20 psi, polyisocyanurate insulation on top of the steel deck. Fasten the insulation to the steel deck with No. 14-13 x 4.5" DP1 Concealor and 3" diameter steel insulation plates. The insulation is secured at a rate of 2 screws and plates per 4' by 8' board.

**Attachment of Metal Roof Panels to the Roof Deck:** Secure the panels to the roof deck with the clip and fastener type as specified in Table 1. Use fasteners long enough to ensure a minimum penetration of 3 pitches of thread below the steel deck.

**Panel Ends and End Laps:** As required by the manufacturer.

**Panel Edges:** As required by the manufacturer.

**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.