

Product Evaluation

RC553 | 0422

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-553

Effective Date: April 1, 2022

Re-evaluation Date: April 2026

Product Name: Series DMC 150SS Mechanical Seam Steel Roofing Panels Installed over a Plywood Deck

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

General Description:

The Series DMC 150SS Mechanical Seam Steel Roofing Panel is a minimum 24-gauge steel panel. The panel has a 1-1/2" rib height. The panels have a maximum coverage of 12" to 20". The panel has a minimum yield strength of 50 ksi.

Limitations:

Design Wind Pressures: The design wind pressure uplift resistance is specified in Table 1.

Roof Framing: Roof framing (rafters or trusses) must not exceed 24" on center.

Roof Deck: Install the steel roof panels over minimum 15/32" plywood.

Roof Deck Attachment: The roof deck must be secured to the roof framing to resist the required wind uplift design pressures.

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. The existing roof deck must be minimum 15/32" plywood. Note: Inspection of the existing roof deck must be made before installing the roof panels. The condition of the existing roof deck must be acceptable to receive the roof panels before the roof panel installation can proceed.

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

Installation:

Panels: The steel roof panels must be attached to the plywood deck in accordance with Table 1 and the manufacturer's recommended installation instructions.

Table 1

Design Wind Pressure	Seam	Clip Spacing	Fasteners per Clip
-93.5 psf	90-degree seam	24" on center	Two fasteners
-101.9 psf	90-degree seam	6" on center	Two fasteners
-123.5 psf	180-degree seam	6" on center	Two fasteners

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The felt must be installed with minimum 4" side laps and minimum 6" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Panels to Roof Deck: The panels must be secured to the deck in accordance with Table 1 with 1.67" tall x 3" long, 24-gauge galvanized steel clips. Each clip is secured to the roof deck with two minimum No. 10 x 1" Pancake Head Type A wood screws. The panels overlap each other and are seamed together using a hand seamer. The fasteners must be long enough to penetrate completely through the deck.

Panel Ends: As required by the manufacturer.

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Trim: Components such as eave trim, rake 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.