

Product Evaluation

RC385 | 0720

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-385

Effective Date: July 1, 2020

Re-evaluation Date: July 2024

Product Name: SMI 2.0 MS 24-gauge Mechanical Standing Seam Steel Roof Panel Installed Over Steel Purlins

Manufacturer: Sheffield Metals International
5467 Evergreen Parkway
Sheffield Village, OH 44054
(800) 283-5262

General Description:

The SMI 2.0 MS is a mechanically seamed standing seam metal roof system. The panel is made of 24-gauge galvalume steel. The vertical leg of the panel measures 2" in height. The panel has a maximum width of 18". The panel can be formed in continuous lengths and interlocks to adjoining panels by field seaming the panels to a 180-degree seam.

Limitations:

Roof Deck: The metal roof panels must be installed over open steel purlins.

New Roof Framing: The roof framing must meet or exceed the uplift requirements of the IRC and IBC and must be installed in a manner to resist lateral loads if required.

Design Wind Pressures: Design wind pressure limitations are specified in Table 1.

Roof Slope: The metal roof panels may be installed on roofs with a roof slope as low as 1/2:12 if sealant is used on the panel side laps. If sealant is not used on the panel side laps, then the minimum roof slope is 2:12.

Installation Over an Existing Roof Covering: Installation over an existing roof covering is not permitted.

Table 1. SMI 2.0 MS 24-gauge Mechanical Standing Seam Steel Roof Panel Installed Over Steel Purlins

Design Wind Pressure (psf)	Purlins	Attachment of Panel to Steel Purlins
-105	Minimum 16-gauge; 1'-0" on center	Two-piece floating clips at 1'-0" on center
-37.5	Minimum 16-gauge; 5'-0" on center	Two-piece floating clips at 5'-0" on center

Installation:

General Installation Requirements:

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

Steel Purlins: The minimum thickness of steel and the maximum spacing of the purlins must be as specified in Table 1.

Underlayment: N/A.

Anchorage to Roof Decking: The metal roof panels must be fastened in accordance with Table 1. The metal roofing panels must be secured to the roof deck with a two-piece floating clip. Each 4.30" long, two-piece clip consists of a float clip base (16-gauge, G90 galvanized steel) and a float clip tab (22-gauge, G90 galvanized steel). The clips are secured with two (2) 1/4-14 x 1-3/8" #2-point Weather Gard self-drilling hex head screws. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin. The legs are mechanically seamed 180 degrees after the clips are installed.

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.

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

Panel Edges: 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.