

Product Evaluation

RC384 | 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-384

Effective Date: July 1, 2020

Re-evaluation Date: July 2024

Product Name: SMI 2.0 MS 24-gauge Mechanical Standing Seam Metal Roof Panel Installed Over Plywood Deck

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 and has a maximum panel 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 Decking: The metal roof panels must be installed over a minimum of 15/32" thick plywood decking.

Roof Deck Attachment: The roof deck must meet or exceed the uplift requirements of the IRC and IBC, and the deck must be installed in a manner to resist lateral loads if required.

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

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.

Design Wind Pressure: For installations to minimum 15/32" thick plywood roof decks, design wind pressure limitations are specified in Table 1.

Table 1. SMI 2.0 MS 24-gauge Mechanical Standing Seam Metal Roof Panel Installed Over Plywood Deck

| Design Wind Pressure (psf) | Panel Seam | Panel Clip | Clip Spacing | Clip Fastener |
|----------------------------|------------|--|--------------|---|
| -84.25 | 180-degree | 2-piece Galvanized Steel Clips Comprised of Butterfly Base 2", 18-gauge G-90 galvanized steel, (2" x 1.75" x 4.5" long); Clip Assembly Butterfly 2", 22-gauge G-90 galvanized steel, (5" x 0.90" with two return flaps 0.40" wide) | 24" Max | (2) #10 x 1" Weather Gard pancake head screws, Type A |

Installation:

General Installation Requirements:

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

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 a minimum of 4" laps. The felt must be fastened to the roof deck with corrosion resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.

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 the two-part clip specified in Table 1, and the clips are spaced at a maximum of 4" from each panel end and a maximum of 24" on center. The clips are secured with two (2) #10 x 1" Weather Gard pancake head screws, Type A. The screws must be long enough to penetrate completely through the roof deck. 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.