TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION Effective Date: January 1, 2013
RC-222

*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 shall be subject to reevaluation in **December 2016.***

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.

DMC 200S 24 Gauge Steel Standing Seam Metal Roofing Panels Installed Over a Plywood Deck, manufactured by

Drexel Metals Inc
204 Railroad Drive
Ivyland, Pennsylvania 18974
Telephone: (888) 321-9630 X115

will be accepted for use in areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

This evaluation report is for the DMC 200S 24 gauge steel standing seam metal roofing panels installed over a plywood deck. The steel standing seam metal roofing panels have 16 inches of coverage. The standing seam metal roofing panels have a 2" rib height and a 180 degree mechanically seamed side lap. The metal roofing panels are manufactured from 24 gauge galvalume steel. Refer to Figure 1 for an illustration of the DMC 200S standing seam panel.

LIMITATIONS

Roof Framing: The metal roofing panels shall be installed over a solidly sheathed minimum $^{15}/_{32}$" plywood roof deck.

New Roof Framing Attachment: The roof framing shall meet or exceed the uplift requirements of the International Residential Code or International Building Code and shall be installed as required for resistance to wind loads.

Design Wind Pressures: The design pressure uplift load resistance shall be as specified in Table 1.

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as $^{1}/_{4}$:12.

Table 1

Attachment of DMC 200S minimum 24 gauge steel standing seam metal roofing panels to minimum $^{15}/_{32}$" plywood roof deck

Design Wind Pressure	Clip Fastener	Clip Spacing
-67.5 psf	Two (2) No. 10 x 1"	24 inches on center

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 $^{15}/_{32}$" plywood. Note: Inspection of the existing roof deck must be made prior to the installation of the roof panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before the metal roofing panel installation proceeds. NOTE: Underlayment is required to be installed.

INSTALLATION INSTRUCTIONS

General: The metal roofing panels shall be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Panels: The metal roofing panels shall be secured to the roof framing as specified in Table 1 and in accordance with this section.

Deck: The roof deck shall be solidly sheathed with minimum $^{15}/_{32}$" plywood.

Underlayment: Minimum of one layer of No. 30 (Type II) asphalt felt shall be used. The underlayment used shall comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed with minimum 4 inch side laps and 6 inch end laps. The underlayment shall be applied with corrosion resistant tin caps and minimum 12 gauge 1 $^{1}/_{4}$" annular ring shank nails. The fasteners shall be spaced 6 inches on center at all end laps and two staggered rows 12 inches on center in the field.

Alternative Underlayment: Either a synthetic underlayment or a peel and stick ice and water shield that complies with the requirements for underlayment as specified in the IRC and the IBC. The underlayment shall be installed per the manufacturer's installation instructions.

Attachment of Metal Roof Panels to the Roof Deck: The metal roofing panels shall be secured to the roof deck with DMC 200S butterfly clips. The butterfly clips consist of a "base" and a "butterfly." Refer to Figure 2 for an illustration of the butterfly clip. The "base" is 18 gauge L-shaped galvanized steel that is 2" wide, 1 $^{3}/_{4}$" high, and 4 $^{1}/_{2}$" long. The base has a $^{1}/_{4}$" wide by 3" long slot located $^{1}/_{2}$" from the top for the "butterfly." The "butterfly" is 22 gauge galvanized steel that is 5.045" long by 0.929" tall with two return flaps. Each DMC 200S butterfly clip is secured to the roof deck with two (2) minimum No. 10 x 1" long pancake head screws as indicated in Table 1. The fasteners shall be long enough to ensure a minimum penetration of $^{1}/_{4}$" below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length shall be increased so that the fasteners are long enough to ensure a minimum penetration of $^{1}/_{4}$" below the existing plywood roof decking.) The buttery fly clips shall be located approximately 3 inches from each end and 24 inches on center as indicated in Table 1. The female rib of the panel is placed over the male/clip assembly and seamed 180 degrees.

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

Panel Edges: As required by the manufacturer.

Trims, Closures, and Accessories: Components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim shall be installed as required by the manufacturer.

Note: The manufacturer's installation instructions shall be available on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.

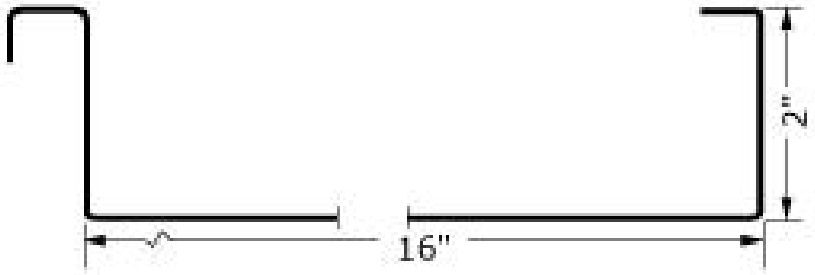

Figure 1. DMC 200S Standing Seam Panel Profile

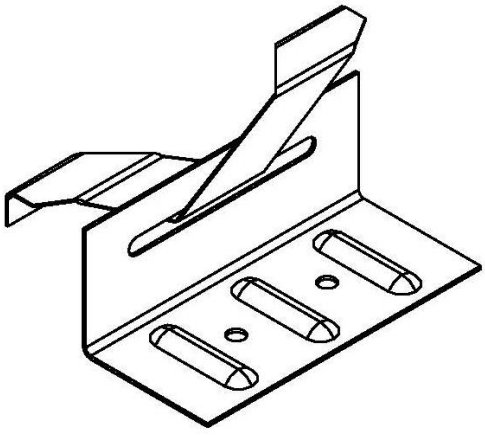

Figure 2. DMC 200S Butterfly Clip