TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective August 1, 2012
RC-158 Revised December 2013

*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 **August 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.

Multi-Cor Metal Roofing Panels manufactured by

McElroy Metal, Inc.
P.O. Box 1148
Shreveport, Louisiana 71163
Telephone: (318) 747-8000

and sold by either **McElroy Metal, Inc.** or by **Metal Mart**, 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

The multi-cor metal roofing panels are a minimum 26 gauge galvalume steel with an optional paint finish. The 26 gauge metal roofing panels are 0.019 inches thick. The metal roofing panels are 33.52 inches in width with an actual coverage of 32 inches. Each metal roofing panel has major sinusoidal ribs, spaced 2.67 inches on center across the panel. The ribs are 0.875 inches deep. The metal roofing panels conform to ASTM A792, with an 80,000 psi yield point for 26 gauge metal panels and a 50,000 psi yield point for 24 gauge or heavier panels. The metal roofing panels have an AZ 55 hot-dip aluminum zinc alloy coating. The metal roofing panels are available in lengths up to 40 feet.

LIMITATIONS

Roof Decking: The multi-cor metal roofing panels shall be installed over minimum $^{15}\!/_{32}$" plywood decking.

New Roof Deck Attachment: The roof decking 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 lateral wind loads.

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

Table 1

Attachment of minimum 26 gauge multi-cor metal roofing panels to minimum $^{15}\!/_{32}$" plywood decking

Design Wind Pressure	Fastener Pattern	Fastener Spacing
-146.0 psf	8"-8"-8"-8"	12 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 $^{15}/_{32}$ inch 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 roof panels before the roof panel installation proceeds. NOTE: Underlayment is not required to be installed.

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as 1:12.

INSTALLATION INSTRUCTIONS

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

Panels: The multi-cor metal roofing panels shall be secured to the roof deck as specified in Table 1 and in accordance with this section. Refer to Figure 1 for an illustration of the required fastener pattern.

Underlayment: A 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 6-inch side laps and 3-inch end laps. The underlayment shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners shall be applied along the overlaps not farther apart than 36 inches on center.

Attachment of Metal Roof Panels to Roof Deck: The multi-cor metal roof panels shall be secured to the roof deck as follows:

Roof Panels: Minimum No. 9-15 x 1 $^1/_2$" long, Woodgrip screws or WoodZAC screws, with a sealing washer. 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.) A line of fasteners are to be installed beginning 2 inches from the center line of the first major side lap in a 8"-8"-8"-8" pattern as specified in Table 1. The spacing of the line of fasteners along the length of the panel shall be 12 inches on center as specified in Table 1. Refer to Figure 1 of this evaluation report.

Panel Side Laps: Minimum $^1/_4$-14 x $^7/_8$" hex head screws with a sealing washer. The fasteners shall be spaced 20 inches on center along the length of the side lap.

Panel Ends: Minimum No. 9-15 x 1 $^1/_2$" long, Woodgrip screws or WoodZAC screws, with a sealing washer. The fasteners shall be long enough to ensure a minimum penetration of $^1/_4$" below the roof deck. (Note: If the metal 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 fasteners are to be spaced 12 inches on center and next to each peak across the width of the panel.

Panel Edges: Minimum No. 9-15 x 1 $^1/_2$" long, Woodgrip scewsor WoodZAC screws with a sealing washer. The fasteners shall be long enough to ensure a minimum penetration of $^1/_4$" below the roof deck. (Note: If the metal 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.) Along the edge of a panel, the fasteners shall be spaced 12 inches on center and next to each peak across the width of the panel.

Trims, Closures, and Accessories: Components, such as the eave trim, rake start trim, rake end, rake tie-in, ridge trim, hi-side tie-in trim, high eave 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.

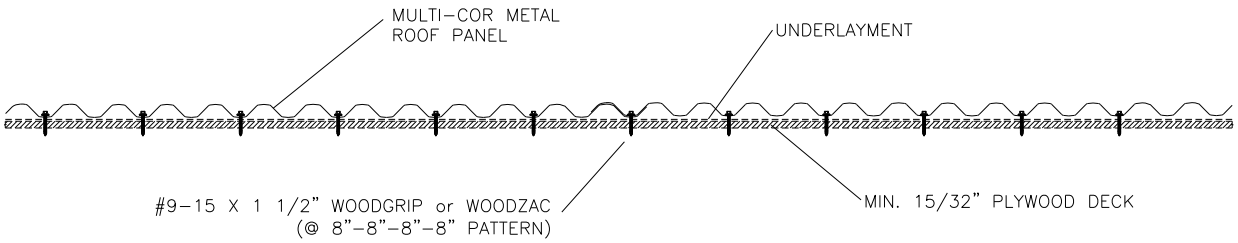

Figure 1. Multi-Cor Panel Detail (Minimum 26 Gauge)