

Product Evaluation

RC292 | 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-292

Effective Date: July 1, 2020

Re-evaluation Date: July 2024

Product Name: Quadra Loc Plus Minimum 26-gauge Steel Roof Panels Installed Over Either Wood Purlins or a Plywood Deck

Manufacturer: BCI Metals
101 Leaning Tree Road
Fort Gibson, OK 74434
(800) 766-5793

General Description:

Quadra Loc Plus Metal Panels are minimum 26-gauge aluminum-zinc alloy coated steel with a Galvalume or painted finish. The nominal panel width is 3'-0" and covers 36". Five major ribs are 3/4" high and are spaced approximately 9" on center. This is a through fastened panel, with minimum yield strength of 80,000 ksi.

Limitations:

Roof Framing: The metal roofing panels must be attached to one of the following substrates:

Plywood Deck: The metal roofing panels must be installed over a minimum of 5/8" thick plywood deck.

Wood Purlins: The metal roofing panels must be installed over wood purlins of minimum 2 x 4 Southern Pine No. 2 spaced a maximum of 24" on center.

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

Design Wind Pressures: The design uplift load resistance must be as specified in Table 1 or Table 2.

Table 1 Attachment of Quadra Loc Plus Minimum 26-gauge Steel Roofing Panels to Plywood Deck

Design Wind Pressure	Attachment of Metal Roof Panels to Plywood Deck
-52.5 psf	1/4"-14 x 1-1/2" long Type AB or No.14 x 1-1/2" long Type A. Fasteners to be installed 24" o.c. along the length of the panel. Fastener spacing across the width of the panel to be 9" o.c.

Table 2 Attachment of Quadra Loc Plus Minimum 26-gauge Steel Roofing Panels to Wood Purlins

Design Wind Pressure	Attachment of Metal Roof Panels to Wood Purlins
-52.5 psf	1/4" -14 x 1-1/2" long Type AB, No. 14 x 1-1/2" long Type AB, No. 14 x 1-1/2" long Type A, or No. 10 x 1-1/2" long Woodgrip, or No. 10-14 x 1-1/2" hex-washer head wood screw with bonded neoprene washer. Fasteners to be installed 24" o.c. along the length of the panel. Fastener spacing across the width of the panel to be 9" o.c.

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as 3:12.

Installation Over an Existing Roof Covering: Not permitted.

Installation:

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

Attachment of Wood Purlins to Roof Framing: The wood purlins must be secured to wood roof framing with two (2) minimum No. 8 x 3" long bugle head screws per attachment point.

Panel Side Laps: As specified in Table 1 or Table 2.

Panel Ends and End Laps to the Wood Purlins: Fastener spacing at panel ends to be in a 1-3/4", 5-1/2", 3-3/4", 5-1/2", 3-3/4", 5-1/2", 3-3/4", and 5-1/2" pattern across the panel width.

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.

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.