

Product Evaluation

RC480 | 0121

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-480

Effective Date: January 1, 2021

Re-evaluation Date: January 2025

Product Name: 24-Gauge Steel Super Span-X Roof Panels Installed Over Steel Purlins

Manufacturer: Whirlwind Building Components
8234 Hansen Road
Houston, TX 77075
(713) 946-7140

General Description:

The Super Span-X metal roofing panels are minimum 24-gauge Galvalume coated steel. The metal roofing panels have 36" of coverage. The metal roof panels have a 1-1/4" rib height. The metal roofing panels conform to ASTM A792, structural quality, with a minimum yield strength of 50 ksi. The metal roofing panels can be painted with a Fluoropolymer finish coating.

Limitations:

Roof Framing: The metal roofing panels must be installed over minimum 16-gauge (0.056") steel purlins.

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

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

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as 3:12. If applied lap sealant is used, then the minimum roof slope is 1/2:12.

Table 1

Attachment of Minimum 24-Gauge Super Span-X Steel Roofing Panels to 16-Gauge Steel Purlins

Design Wind Pressure (psf)	Attachment of Roof Panel to 16 Gauge Steel Purlins
-173.0 psf	Fastener Pattern No. 1 with purlins spaced at 24" o.c.
-154.1 psf	Fastener Pattern No. 1 with purlins spaced at 30" o.c.
-135.3 psf	Fastener Pattern No. 1 with purlins spaced at 36" o.c.
-116.4 psf	Fastener Pattern No. 1 with purlins spaced at 42" o.c.
-97.6 psf	Fastener Pattern No. 1 with purlins spaced at 48" o.c.
-78.7 psf	Fastener Pattern No. 1 with purlins spaced at 54" o.c.
-59.9 psf	Fastener Pattern No. 1 with purlins spaced at 60" o.c.

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.

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

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

Attachment of Metal Roof Panels to the Steel Purlins: The metal roofing panels must be secured to the steel purlins with minimum Atlas Brand No. 12-14 x 1-1/4" long, UltiMate HWH self-driller screws with integral washers (or equal). A line of fasteners must be located along each steel purlin. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlins. The required fastener pattern, the maximum allowable spacing of the fastener lines, and the attachment of the purlins to the roof framing is specified in Table 1. Refer to Figure 1 for illustrations of the fastener patterns.

Panel Side Laps: The panels are stitched together with minimum 1/4-14 x 7/8" long hex head screws with a 5/8" dome washer. The fasteners must be spaced 20" on center along the length of the side lap.

Alternative Fasteners: Alternative fasteners of equal or greater strength may be substituted.

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.

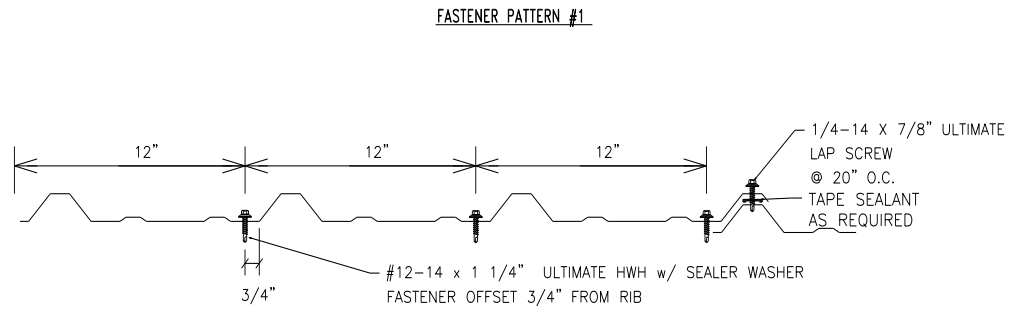


Figure 1. Super Span-X Metal Roofing Panel Secured to 16-Gauge Steel Purlins