

## Product Evaluation

RC339 | 0220

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-339

**Effective Date:**

**Re-evaluation Date:** February 2024

**Product Name:** Smart Rib Plus Minimum 29-Gauge Steel Roof Panels Installed Over a Wood Structural Panel Deck

**Manufacturer:** Paramount Metals, Inc.  
761 W. Henri De Tonti Blvd.  
P.O. Box 249  
Springdale, AR 72762  
(479) 361-9477

### General Description:

The Smart Rib steel roof panel is minimum 29-gauge steel panel that has an effective width of 36". The panel has a yield strength of 80,000 psi.

### Limitations:

**Roof Decking:** The metal roof panels must be installed over a minimum of 7/16" thick OSB or 5/8" thick plywood wood structural panel decking as specified in Table 1.

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

**Design Wind Pressures:** For installations to minimum 7/16" thick OSB or 5/8" thick plywood wood structural panel roof decks, design wind pressure limitations are specified in Table 1.



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

**Roof Slope:** The panels must not be installed on roofs with a roof slope less than 3:12.

**Table 1.** Smart Rib Plus Minimum 29-Gauge Steel Roof Panels Installed Over Wood Deck

System	Roof Deck	Design Pressure	Panel Seam	Panel Fasteners
1	7/16" OSB	-52.5 psf	Smart Rib Plus	No. 9-15 x 1" long sharp point screws with a hex-washer head and sealing washer
2	5/8" Plywood	-52.5 psf	Smart Rib Plus	1/4-14 x 1-1/2" long Type AB screws <b>OR</b> 1/4-14 x 1-1/2" long Type A screws

**Installation:**

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

**Roof Framing Members:** The roof framing members must be spaced a maximum of 24" on center.

**Underlayment:** Minimum of one layer of No. 15 (Type I) 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 underlayment must be installed in accordance with the minimum requirements in the IRC and IBC.

**Anchorage to Roof Decking (System 1):** The metal roof panels must be fastened to the roof deck with No. 9-15 x 1" long sharp point screws with a hex-washer head and sealing washer. The screws must be spaced a maximum of 12" o.c. along one side of each rib except at panel overlap locations where fasteners are to be spaced 12" o.c. and located on both sides of the lap.

**Anchorage to Roof Decking (System 2):** The metal roof panels must be fastened to the roof deck with 1/4-14 x 1-1/2" long Type AB or 1/4-14 x 1-1/2" long Type A screws. The screws must be spaced a maximum of 24" o.c. along the length of the panel. The fastener spacing across the width of the panel must be 9" o.c. beginning 1-3/4" from the center line on one side of each major rib. Fastener spacing at panel ends must be 1-3/4" from the center line on one side of each major rib. The 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 5-3/4".

**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.