

## Product Evaluation

RC424 | 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-424

**Effective Date:** February 1, 2020

**Re-evaluation Date:** February 2024

**Product Name:** 26-Gauge R-Loc Steel Roof Panel Installed Over Steel Purlins

**Manufacturer:** Central States Manufacturing  
302 Jane Place  
Lowell, AR 72745  
(800) 356-2733

### General Description:

The R-Loc steel roof panel is a minimum 26-gauge, 50 ksi steel panel that has an effective width of 36". The panel has a yield strength of 80,000 psi.

### Limitations:

**Roof Framing:** Install the metal roof panels over a minimum 16-gauge steel purlins as specified in Table 1.

**New Roof Framing Attachment:** The roof framing must meet or exceed the uplift requirements of the IRC and IBC. Install the decking in a manner to resist lateral loads.

**Design Wind Pressures:** Table 1 specifies installations to minimum 16-gauge steel purlins, design wind pressure limitations.

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

**Roof Slope:** The metal roofing panels may be installed on roofs with a roof slope as low as 1/4:12 if sealant is used on the panel laps. If sealant is not used on the panel laps, then the minimum roof slope is 3:12.

**Table 1.** 26-Gauge R-Loc Steel Roof Panel Installed Over Steel Purlins

Design Wind Pressure	Steel Purlin Spacing	Attachment of Panel to Steel Purlins
-109.2 psf	2'-0" o.c.	Fasteners @ 12"-12"-12" 2'-0" o.c.
-41.6 psf	5'-0" o.c.	Fasteners @ 12"-12"-12" 5'-0" o.c.

**Installation:**

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

**Roof Framing Members:** Table 1 specifies the minimum thickness and spacing of the steel purlins.

**Underlayment:** N/A.

**Anchorage of Metal Panels to Steel Purlins:** Secure the metal roofing panels to the steel purlins with No. 12-14 x 1-1/4" long SteelBinder HWH self-driller screws with integral washer Self-driller by Sealtite. Locate a line of fasteners along each steel purlin. Table 1 specifies the fastener pattern and the spacing of the fasteners. The fasteners are offset 0.75" from the ribs. Use fasteners long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin.

**Panel Side Laps:** The panels must overlap one corrugation. The panels are stitched together with a minimum 1/4"-14 x 7/8" long SteelBinder lap screw with integral washer Self-driller by Sealtite. Space the lap screws 20" on center along the length of the side lap.

**Trims, Closures, and Accessories:** Install components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim 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.