

## Product Evaluation

RC93 | 1120

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-93

**Effective Date:** November 1, 2020

**Re-evaluation Date:** November 2024

**Product Name:** Instaloc Steel Roof Panels Installed Over a Plywood Deck

**Manufacturer:** McElroy Metal, Inc.  
P.O. Box 1148  
Shreveport, LA 71163  
(318) 747-8000

**Distributed By:** McElroy Metal, Inc.  
Metal Mart

### General Description:

Instaloc roof panels are cold formed coated steel in a 26-gauge (0.020") thickness. The panel conforms to AZ 55 Grade with a minimum 80,000 psi yield strength. The panels are manufactured in a 17-3/4" net coverage width with an integral 1" snap together seam.

### Limitations:

**Roof Decking:** The Instaloc steel roofing panels must be installed over minimum 15/32" plywood decking.

**New Roof Deck Attachment:** The roof decking must meet or exceed the uplift requirements of the IRC or IBC and must be installed as required for resistance to lateral wind loads.

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

**Table 1.** Attachment of 26-gauge Instaloc Steel Roof Panels to Minimum 15/32" Plywood Deck

Design Wind Pressure	Attachment of Roof Panel to 15/32" Plywood Deck
-52.5 psf	Two No. 10-12 Type A at 24" 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" 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 metal roofing panels before the metal roofing panel installation proceeds. NOTE: Underlayment is not required to be installed.

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

**Installation:**

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

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

**Underlayment:** A minimum of one layer of No. 30 (Type II) 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 with 6" side laps and 3" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.

**Attachment of Metal Roofing Panels to Roof Deck:** The metal roofing panels must be secured to the roof deck as follows:

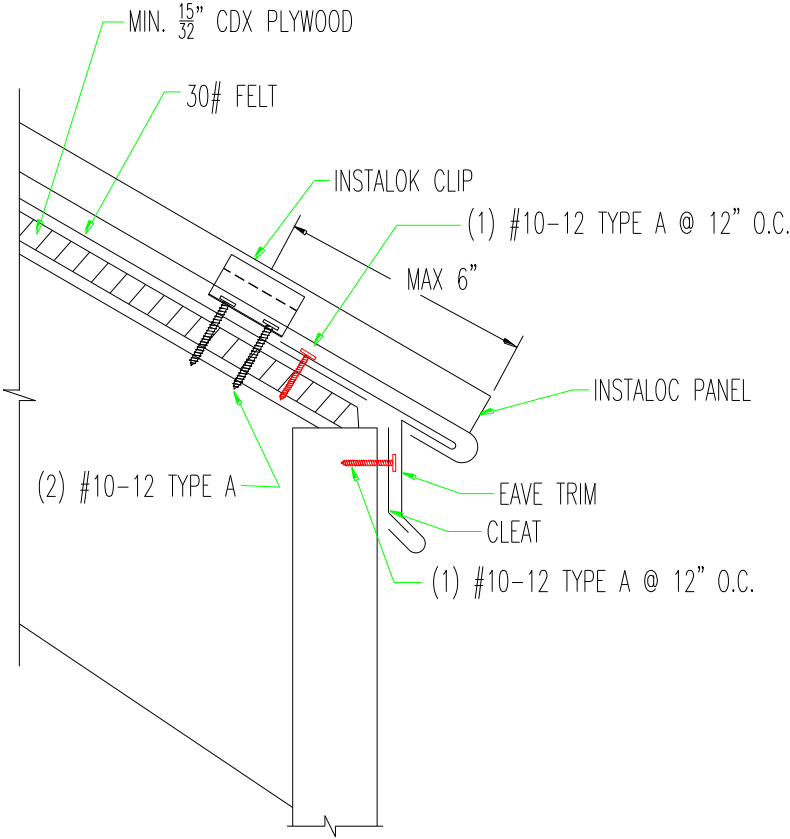
The panels must be fastened in accordance with Table 1 with two No. 10-12 x 1" Type A Pancake Head screws, manufactured by Construction Fasteners, Inc. If the panels are laid directly over an existing roof covering, then No. 10-12 x 2" Type A Pancake Head screws are required. The fasteners must be long enough to penetrate completely through the wood structural panels with a minimum exposure of 1/4" below the underside of the wood structural panels.

**Ridge Cap and Rake Trim:** The ridge cap and the rake trim must be attached to the panels as indicated in Figure 1 through Figure 4.

**Alternative Fasteners:** Substitution of equivalent fasteners must meet the following requirements:

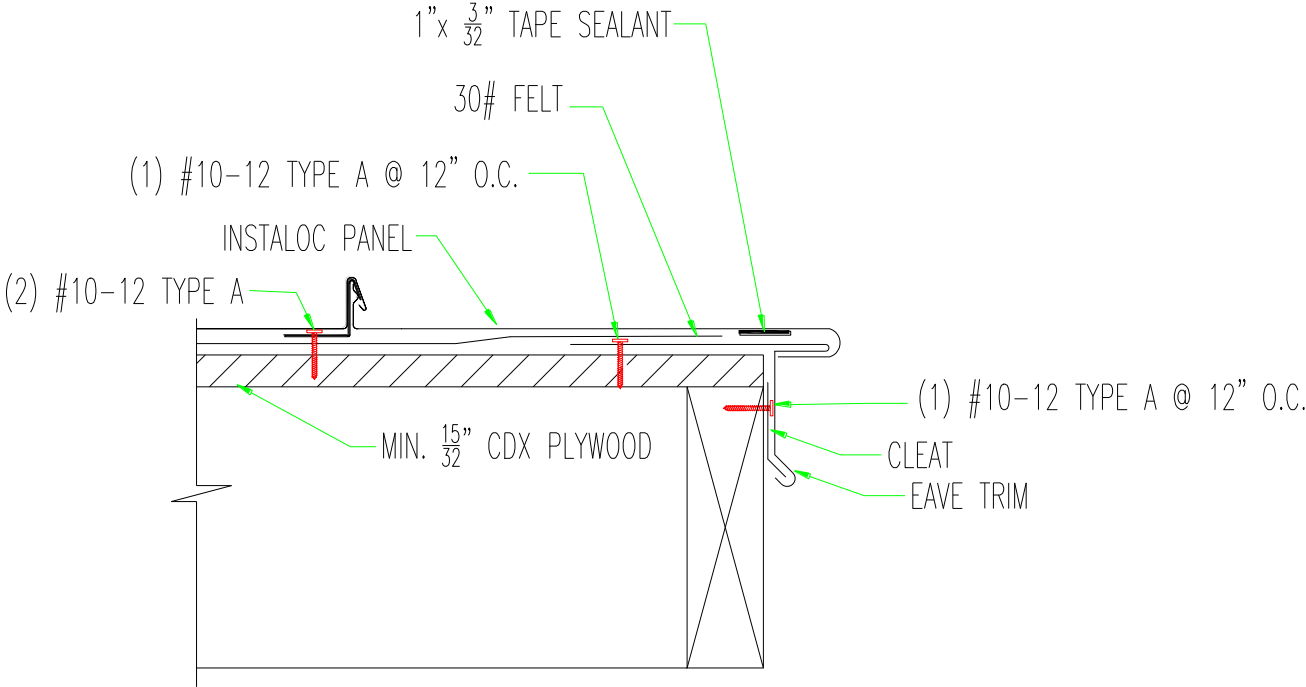
No. 10-12 Type A Pancake Head screws, manufactured by Construction Fasteners, Inc.  
Ultimate withdrawal (pullout)  $\geq$  339 lbs. in 15/32" plywood

**Note:** Keep the manufacturer's installation instructions on the job site during the installation.  
Use corrosion resistant fasteners as specified in the IRC and the IBC.



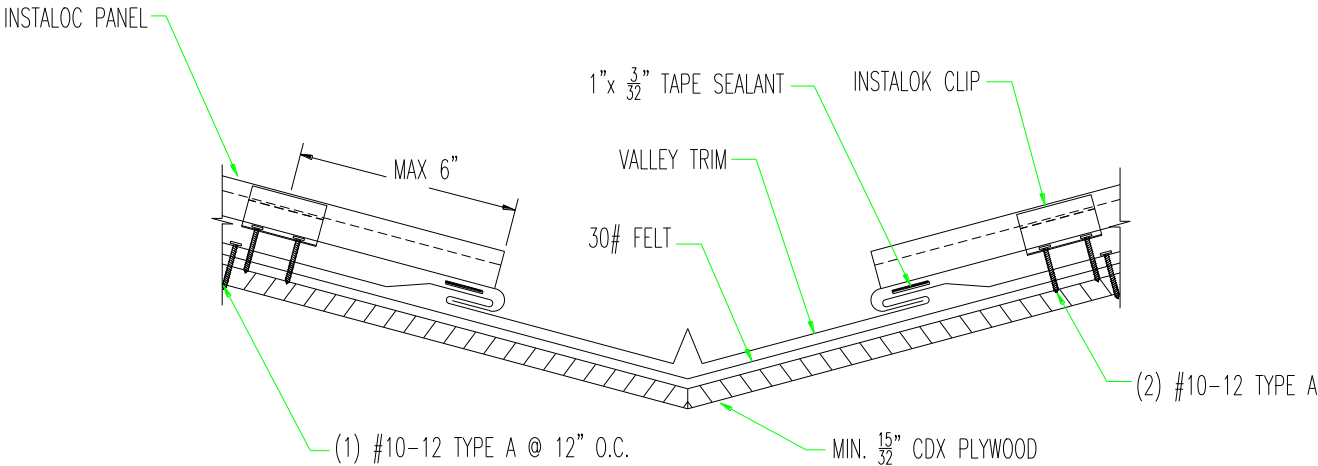
NOTE:  
NOTCH SEAM BACK 7/8"  
AND FOLD PAN AROUND  
EXTENDED EAVE.

Figure 1: Instaloc Panel Eave Detail



NOTE:  
FIELD CUT PANEL TO CORRECT  
WIDTH, FOLD AROUND RAKE TRIM.

Figure 2: Instaloc Panel Rake Detail



NOTE:  
FIELD CUT PANEL TO VALLEY ANGLE,  
NOTCH SEAM BACK 7/8", FOLD  
PANEL END INTO VALLEY HEM.

Figure 3: Instaloc Panel Valley Detail

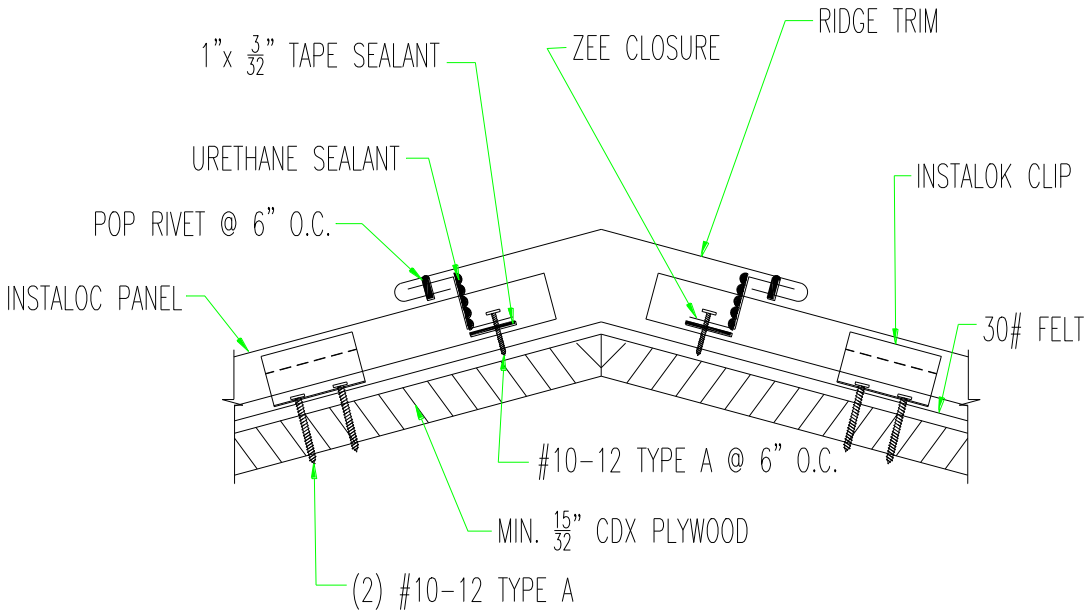


Figure 4: Instaloc Panel Ridge Detail