

## Product Evaluation

RC86 | 0823

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-86

**Effective Date:** August 1, 2023

**Re-evaluation Date:** August 2027

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

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

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

### General Description:

ABC Instaloc roof panels are cold formed coated steel in a 24-gauge thickness. The panel conforms to AZ 55 Grade with a minimum 50,000 psi yield strength. The panels are manufactured in a 13" net coverage width with an integral 1" snap together seam.

### Limitations:

**Roof Decking:** The metal roofing panels must be installed over a minimum 15/32" plywood roof deck.

**New Roof Decking 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 wind loads.

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

**Roof Slope:** Install the metal roofing panels on roofs with a roof slope as low as 3:12.

**Table 1:** Attachment of minimum 24-gauge ABC Instaloc steel roofing panels to plywood deck

Design Wind Pressure (psf)	Attachment of Instaloc Clip to Plywood Deck
-52.5	(2) No. 10-12 x 1" Type A @ 2'-0" o.c.
-82.5	(2) No. 10-12 x 1" Type A @ 1'-6" o.c.
-112.5	(2) No. 10-12 x 1" Type A @ 1'-0" o.c.

**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: Inspect the existing roof deck 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.

#### **Installation:**

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

The installation of the panels must be limited to extending one to two inches beyond the plane of the fascia board.

**Panels:** Panels must be attached to the roof deck using 24-gauge steel Instalock Clips with fasteners in accordance with Table 1. Refer to Figures 1 through 4 in this evaluation report for installation details.

**Underlayment:** Use a minimum of one layer of No. 30 (Type II) asphalt felt. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The felt must be installed with 6-inch side laps and 3-inch end laps. Install the underlayment per manufacturer's installation instructions. Note: An optional radiant barrier may be installed beneath the panels in conjunction with the underlayment.

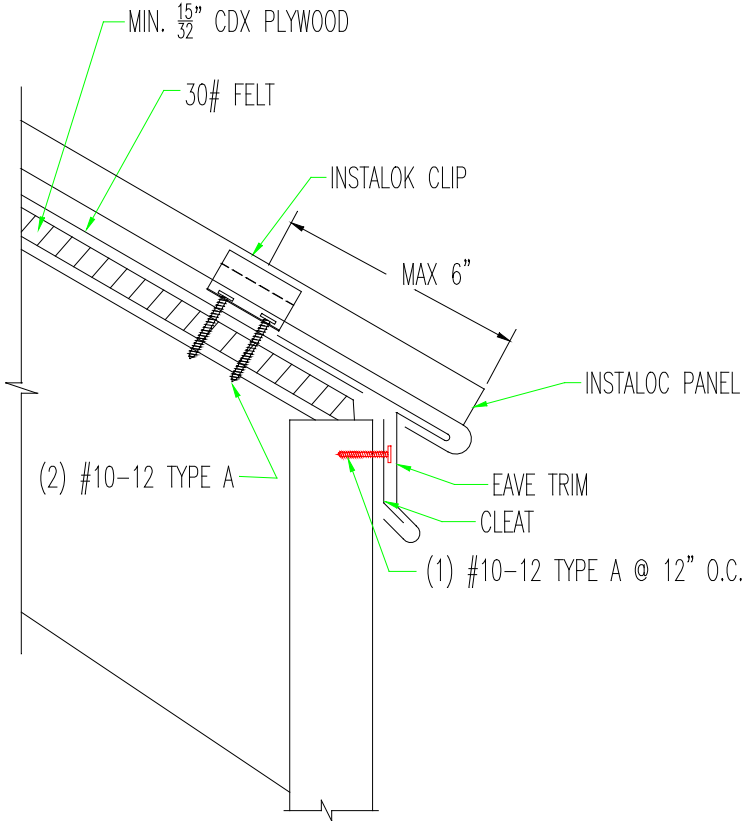
**Anchorage of Panels to Roof Deck:** The panels must be secured to the roof deck using 24-gauge steel Instalock Clips (one-piece clip; 2" long x 1-3/32" high; 1-275" deep base; galvanized) with two (2) No. 10-12 x 1" Type A Pancake Head screws, manufactured by Construction Fasteners, Inc. The Instalock clips must be spaced as specified in Table 1. If the panels are laid directly over an existing roof covering, then minimum 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 roof deck.

**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.

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

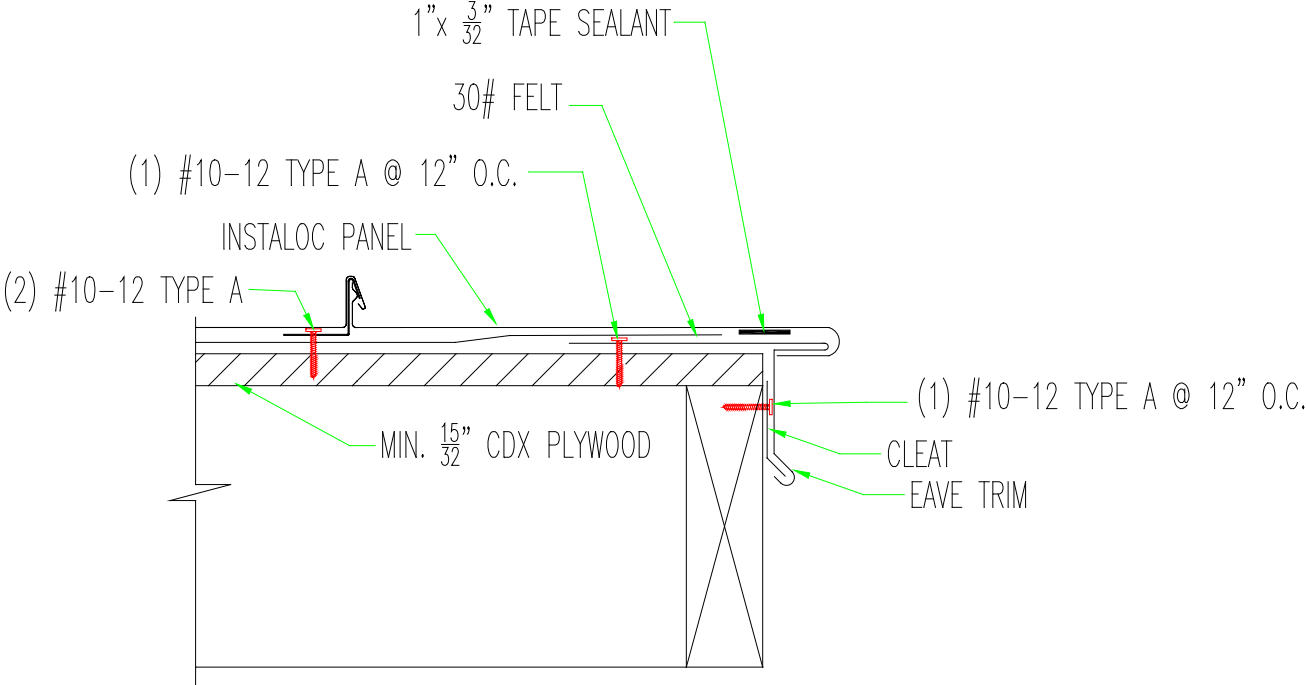
No. 10-12 Type A Pancake Head screws, manufactured by Construction Fasteners, Inc. Ultimate withdrawal (pullout)  $\geq$  339 lbs. in 15/32" plywood.

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



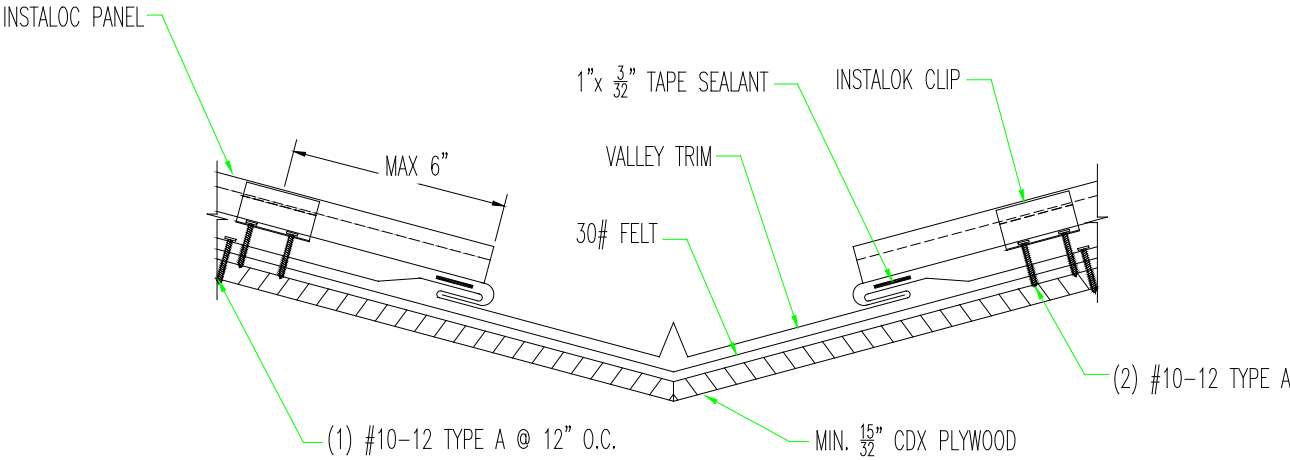
NOTE:  
NOTCH SEAM BACK 7/8"  
AND FOLD PAN AROUND  
EXTENDED EAVE.

Figure 1: ABC Instaloc Panel Eave Detail



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

Figure 2: ABC Instaloc Panel Rake Detail



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

Figure 3: ABC Instaloc Panel Valley Detail

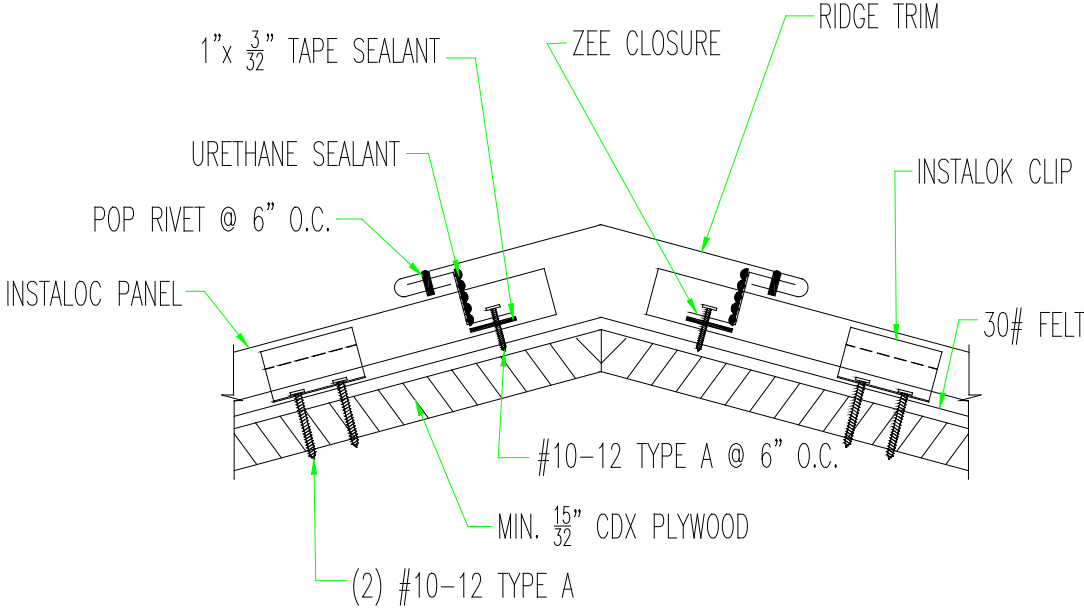


Figure 4: ABC Instaloc Panel Ridge Detail