

Product Evaluation

RC749 | 0424

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-749

Effective Date: April 1, 2024

Re-evaluation Date: April 2028

Product Name: AR 150 DLS Steel Standing Seam Panels Installed Over Plywood Deck

Manufacturer: Absolute Roofing
2920 N. Twin City Hwy.
Nederland, TX 77627
(409) 724-0304

General Description:

The AR 150 DLS roofing panels are minimum 24-gauge galvalume steel standing seam panels with an optional paint finish. The steel roofing panels have a maximum 17" of coverage. The steel roof panels have a 1.5" tall mechanical double lock standing seam rib. The steel roofing panels are manufactured from minimum 24-gauge steel that conforms to ASTM A 792, AZ55, Grade 50 with 50,000 psi yield strength. The panels must be formed within the panel rollformer specifications and tolerances. The rollformer is a Panel Rollformer New Tech Machinery Corp., SS150 Profile.

Limitations:

Roof Decking: Install the steel roof panels with clips over a minimum 15/32" thick plywood deck.

New Roof Deck Attachment: The roof framing 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 wind uplift pressure must be as specified in Tables 1.

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 existing roof deck must be made prior to the installation of the roofing panels. The condition of the existing roof deck must be acceptable to receive the steel roofing panels before roof panel installation can begin.

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as 1/4:12.

Table 1 Attachment of 24-gauge AR 150 DLS standing seam roof panels to minimum 15/32" Plywood deck

Panel Clip Spacing	Design Wind Pressure (psf)
30" on center	-71.0
27" on center	-80.4
24" on center	-89.8
21" on center	-99.1
18" on center	-108.5
15" on center	-117.9
12" on center	-127.3
9" on center	-136.6
6" on center	-146.0

Installation:

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

Roof Framing Members: Space the roof-framing members at maximum of 24" on center.

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. Install the underlayment 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, the IRC, or the IBC.

Attachment of Roof Panels to Plywood Deck: The steel roofing panels are secured to the wood deck using fixed clip (one piece, 0.0255" thick, 24-gauge galvanized steel, 2" long) with two No. 10-12 x 1" long Pancake Type 17 screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: if the roof panels are installed over an existing roof covering, then the fastener length must be increased so that the fasteners are long enough to ensure a minimum penetration of 1/4" below the existing roof deck). The maximum allowable spacing of the clips is specified in Table 1.

Panel Seam: The panel is seamed to a 180-degree seam (double lock) with a mechanical seamer.

Panel Ends and Edges: As required by the manufacturer.

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.