

Product Evaluation

RC651 | 0521

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-651

Effective Date: May 1, 2021

Re-evaluation Date: May 2025

Product name: 900 HS Steel Roof Shingles Installed Over a Plywood Deck

Manufacturer: Englert, Inc.
1200 Amboy Avenue
Perth Amboy, NJ 08861
(732) 826-8614

General Description:

The 900 HS steel roof shingles are 13-1/4" wide by 120" long. The steel roof shingles are formed from 24-gauge steel. The shingles have a 12" exposure.

Limitations:

Roof Deck: Install the roof shingles with clips over a minimum 15/32" thick plywood deck.

New Roof Deck Attachment: The roof deck must meet or exceed the uplift requirements of IRC or the IBC.

Design Wind Pressures: Table 1 specifies the design wind pressure limitations.

Table 1: Minimum 24-gauge 900 HS Steel Shingles Installed Over a Minimum 15/32" Plywood Deck

Panel Clip Spacing	Design Wind Pressure (psf)
24" on center	-60.0
18" on center	-112.5

Roof Slope: Do not install the product on roof slopes less than 3:12.

Installation Over an Existing Roof Covering: If installing over an existing roof covering, limit to a maximum of one existing layer of composition shingles 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 existing roof deck's condition must be acceptable to receive the roof panels before installing the roof panel. Installation over an existing roof covering requires underlayment to be installed.

Installation:

General: Install the steel roof shingles in accordance with the manufacturer's installation instructions and this production evaluation.

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

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 felt must be installed with minimum 2" side laps and 3" end laps. The felt must be fastened to the roof deck with galvanized roofing nails along the overlap at a maximum of 36" on center.

Anchorage of Steel Shingles to Roof Deck: The steel shingles are interlocked with the previous course and secured to the roof deck with one-piece, 22-gauge, galvanized steel clips. The clips are 2-3/4" wide, 4.00" long, and 3/4" high. Each clip is secured to the roof deck using two (2) No. 10-13 x 1" long, GP pancake head screws. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. Clips are spaced as specified in Table 1. (Note: if the roofing 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 plywood roof decking.)

Panel Ends and Edges: As required by the manufacturer.

Trims, Closures, and Accessories: Components, such as 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, the IBC, and the Texas Revisions.