

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION RC-307

Effective November 1, 2011

*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 shall be subject to reevaluation **November 2015**.*

*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.*

**Series 2500 Aluminum Roofing Panels Installed Over a Steel Deck**, manufactured by

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

will be accepted for use in areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

The Series 2500 aluminum roofing panel is a 0.040 gauge aluminum architectural roof system that is mechanically seamed. The panel is fabricated from a 22" wide coil of 0.040 gauge aluminum and has an effective area of 16" in width. Each finished roof panel is 120" long and has a male vertical leg that is 2" high and female vertical leg measuring 2" high. Refer to Figure 1 for an illustration of the Englert Series 2500 standing seam panel.

## LIMITATIONS

**Roof Framing:** The Series 2500 metal roof panels shall be installed over steel deck as specified in this report. The steel deck is secured to steel purlins.

**New Roof Framing Attachment:** The roof framing shall meet or exceed the uplift requirements of the International Residential Code and International Building Code, and the decking shall be installed in a manner to resist lateral loads.

**Design Wind Pressures:** The design wind pressure limitations are specified in Table 1.

**Roof Slope:** The panels shall not be installed on roofs with a roof slope less than  $\frac{1}{2}$ :12.

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

**Table 1**  
**Attachment of 16" Wide 0.040 gauge**  
**Aluminum Roofing Panels to Steel Deck**

System No.	Design Pressure (psf)	Purlins	Steel Deck	Panel Seam	Panel Clip	Clip Spacing	Clip Fastener
1	-63.5	40" o.c.	Min. 22 gauge	180° Mechanical Seam	6" long, 2 pc Clip Base: 18 ga. galvanized Steel Tab: 24 ga. Stainless Steel	24"	(2) #14 Truss head screws
2	-121.75	40" o.c.	Min. 22 gauge	180° Mechanical Seam	6" long, 2 pc Clip Base: 18 ga. galvanized Steel Tab: 24 ga. Stainless Steel	12"	(2) #14 Truss head screws

### INSTALLATION INSTRUCTIONS

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

**Steel Purlins:** The minimum thickness of the steel and the maximum spacing of the purlins shall be as specified in Table 1.

**Structural Steel Deck:** Minimum 22 gauge ASTM A653 steel "B" deck with a G90 galvanized coating. Each steel deck panel is 37" wide and has 6 ribs that are 1 1/2" in height. The steel deck is secured to the steel purlins with puddle welds located 6" o.c. (one in each valley). Steel deck side laps are stitched together with 1/4" x 3/4" Hex washer head self-drilling screws spaced 6 inches on center.

**Insulation:** Minimum 1" thick and maximum 4" thick 25 psi compressive strength ISO insulation board; The insulation board is cut to size and secured to the B deck with No. 14 screws that are of sufficient length to penetrate the steel deck a minimum of 1/2". 24 gauge galvalume, 3" diameter bearing plates are used with each screw.

**Underlayment:** A minimum of one layer of No. 30 (Type II) asphalt felt shall be used. The underlayment used shall comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed with 6-inch side laps and 3-inch end laps. The underlayment shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners shall be applied along the overlaps not farther apart than 36 inches on center.

**Alternative Underlayment:** A minimum of one layer of self-adhering underlayment that complies with ASTM D 1970 may be used. The underlayment shall be installed per the manufacturer's installation instructions.

**Attachment of Metal Roof Panels to the Roof Deck:**

**System 1:** The metal roofing panels shall be secured to the roof deck with a panel clips per Table 1. The clips are located 12" from the ends of the panels and are spaced 24 inches on center. The clips are secured with two (2) No. 14 x 6" Truss head screws. The panels overlap each other and a mechanical seamer is utilized to crimp the seams together 180° (double-lock).

**System 2:** The metal roofing panels shall be secured to the roof deck with a panel clips per Table 1. The clips are located 12" from the ends of the panels and are spaced 12 inches on center. The clips are secured with two (2) No. 14 x 6" Truss head screws. The panels overlap each other and a mechanical seamer is utilized to crimp the seams together 180° (double-lock).

**Trims, Closures, and Accessories:** Components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim shall be installed as required by Englert Metal Roofing Installation Manual.

**Note:** The manufacturer's installation instructions shall be available on the job site during the installation. All fasteners, clips and plates shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.

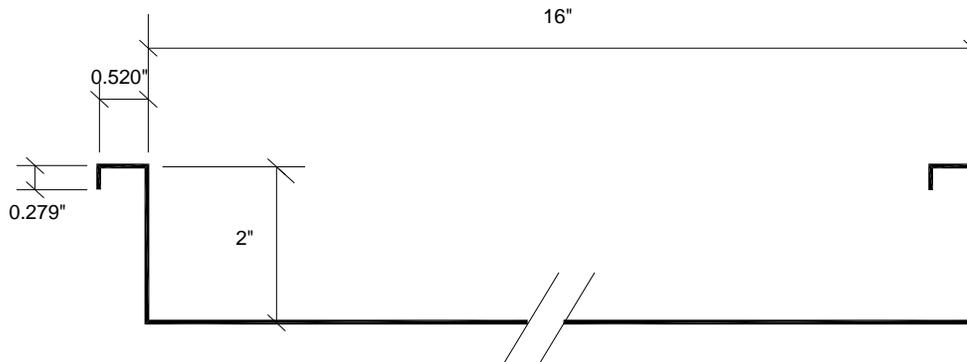


FIGURE 1. ENGLERT SERIES 2500 STANDING SEAM PANEL PROFILE

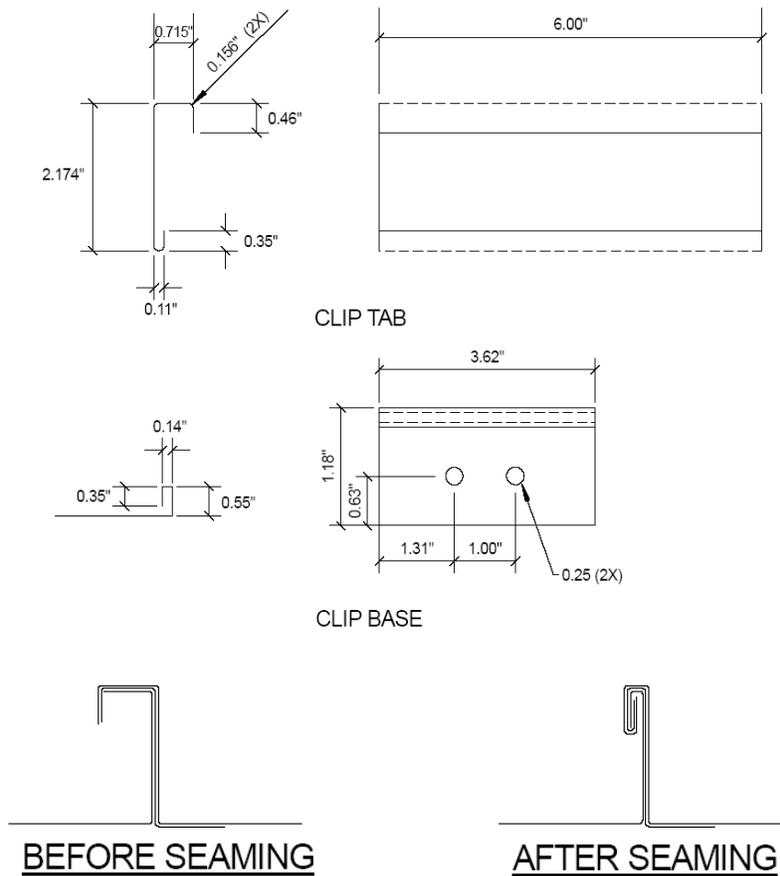


FIGURE 2. ENGLERT SERIES 2500 PANEL CLIP PROFILE