

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION RC-275

Effective December 1, 2010

*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 **October 2013**.*

*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.*

**29 Gauge Green Generation Shingle, Metal Roofing Panel**, manufactured by

**Blosser Stephens, LLC**  
**512 North Eastern Avenue**  
**St. Henry, Ohio 45883**  
**Telephone: (491) 763-4055**  
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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 Green Generation Shingles are 29 gauge steel panels. Each steel panel has formed edges that act as interlocking seals with adjacent panels. The steel panels have a steel galvalume substrate with a four coat Kynar/Hylar paint system by AkzoNobel. The steel panels have an overall length of 33  $\frac{7}{16}$ " and an overall width of 23". The steel panels have a yield strength of 50 ksi. The steel panels are installed over a wood structural panel roof deck.

## LIMITATIONS

**Roof Decking:** The steel panels shall be installed over minimum nominal  $\frac{19}{32}$ " plywood decking.

**New Roof Deck Attachment:** The roof decking shall meet or exceed the uplift requirements of the International Residential Code or International Building Code and shall be installed as required for resistance to lateral wind loads.

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

Table 1

System	Design Wind Pressure
1	-41.6 psf
2	-108.5 psf

**Installation Over an Existing Roof Covering:** Not Permitted. The existing roof covering shall be removed and the steel panels installed to the existing roof deck. The existing roof deck shall be minimum nominal  $\frac{19}{32}$ " plywood decking. Note: Inspection of the existing roof deck shall be made prior to the installation of the steel panels.

**Roof Slope:** The metal roofing panels may be installed on roofs with a roof slope as low as 2:12.

## INSTALLATION INSTRUCTIONS

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

**Underlayment:** A minimum of one layer of No. 15 (Type I) 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.

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

**System 1:** The metal panels are secured to the wood deck with minimum No. 10-10 x  $1\frac{1}{2}$ " bugle head milled point screws. The screws are inserted in pre-drilled holes located along two edges of the panel (the top and right side of the panel). A total of eight (8) fasteners are required for each panel. When the metal panels are installed, these fasteners will be concealed. The metal panel laps are secured together with 3M™ 5952 VHB™ double-sided adhesive tape. The metal panels are secured to the perimeter of the wood deck with minimum No. 10-10 x  $1\frac{1}{2}$ " dome head milled point fasteners with seal washers. The fasteners are spaced 6 inches on center. The fasteners shall be long enough to ensure a minimum penetration of  $\frac{1}{4}$ " below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length shall be increased so that the fasteners are long enough to ensure a minimum penetration of  $\frac{1}{4}$ " below the existing plywood roof decking.)

**System 2:** The metal panels are secured to the wood deck with minimum No. 10-10 x  $1\frac{1}{2}$ " bugle head milled point screws. The screws are inserted in pre-drilled holes located along two edges of the panel. A total of eight (8) fasteners are required for each panel. When the metal panels are installed, these fasteners will be concealed. The metal panel laps are secured together with 3M™ 5952 VHB™ double-sided adhesive tape. In addition, the panels are also secured to the wood roof deck with minimum No. 10-10 x  $1\frac{1}{2}$ " dome head milled point screws with a seal washer. Two (2) fasteners are required along the left side, located 5 inches from each end and approximately  $\frac{1}{2}$ " from the edge. Three (3) fasteners are required along the bottom, located 5 inches from each end and one at the center, approximately  $\frac{1}{2}$ " from the edge. The metal panels are secured to the perimeter of the wood deck with minimum No. 10-10 x  $1\frac{1}{2}$ " dome head milled point fasteners with seal washers. The fasteners are spaced 6 inches on center. The fasteners shall be long enough to ensure a minimum penetration of  $\frac{1}{4}$ " below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length shall be increased so that the fasteners are long enough to ensure a minimum penetration of  $\frac{1}{4}$ " below the existing plywood roof decking.)

**Trims, Closures, and Accessories:** Components, such as the eave trim, rake trim, ridge trim, and valley trim shall be installed as required by the manufacturer.

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