TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective February 1, 2013
RC-148 Revised April 1, 2013

*The following product has been evaluated for compliance with the wind loads specified in **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **December 2014**.*

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.

Delta Shake Roofing Panels (Steel and Aluminum) manufactured by

Delta Building Products, Ltd.
9969 River Way
Delta, British Columbia V4G 1M8
Canada
Telephone: (604) 953-1000

and distributed by the following companies:

Delta Building Products, Ltd
Future Roof, Inc.
Interlock Industries, Ltd

is acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

Delta shake roofing panels are steel and aluminum roofing panels. The roofing panels are secured to a solid roof deck using clips that are secured to the roof deck with fasteners. The roofing panels are described as follows:

Steel Roofing Panels: The steel roofing panels are cold-press-formed from sheet steel that complies with ASTM A 653, Grade 33. The steel roofing panels have a G90 galvanized coating. The thickness of the galvanized coated panels is 0.0190 inch. The sheet steel is coated with a Durapon 70 / Hylar 5000 paint at an application thickness of 1.0 mil on the exterior side and an application thickness of 0.5 mil on the interior side. The steel panels are 13 ½ " wide by 50" long. The installed exposed dimensions of the steel panels are 12 ½ " wide by 47" long. The leading front edge of the panel is bent down to form a lip while the trailing rear edge of the panel is bent up to form a lip. The lip of the leading front edge of one panel locks into the lip of the trailing rear edge of another panel. There is a 3" wide side lap located on the right side of each panel.

Aluminum Roofing Panels: The aluminum roofing panels are cold-press-formed from 3003-H24 aluminum alloy that complies with ASTM B 209. The thickness of the aluminum panels is 0.0276 inch. The aluminum is coated with Alunar paint at an application thickness of 1.0 mil on the exterior side and an application thickness of 0.5 mil on the interior side. The aluminum panels are 13 ½" wide by 50" long. The installed exposed dimensions of the aluminum panels are 12 ½" wide by 47" long. The leading front edge of the panel is bent down to form a lip while the trailing rear edge of the panel is bent up to form a lip. The lip of the leading front edge of one panel locks into the lip of the trailing rear edge of another panel. There is a 3" wide side lap located on the right side of each panel.

LIMITATIONS

Roof Deck: The roof deck shall be solidly sheathed. The minimum required thickness of the deck shall be 15/32" plywood panels.

Roof Deck Attachment: The roof deck shall be secured to the roof framing to resist the required wind uplift design pressures.

Design Wind Pressures: The roof panels, when installed in accordance with this evaluation report, have the allowable wind uplift pressures specified in Table 1 and Table 2.

Table 1
Aluminum Panels

System	Number of Clips per Panel	Fastener Type	Number of Fasteners per Clip	Allowable Wind Pressure (psf)
1	3	Stainless steel; No. 10 wood screw	1	-45
2	4	Stainless steel; No. 10 wood screw	2	-115
3	4	Aluminum ring Shank nail	1	-37.5
4	4	Aluminum Ring shank nail	2	-80

Table 2
Steel Panels

System	Number of Clips per Panel	Fastener Type	Number of Fasteners per Clip	Allowable Wind Pressure (psf)
5	3	Galvanized steel; No. 10 wood screw	1	-45
6	4	Galvanized steel; No. 10 wood screw	2	-115
7	4	Galvanized steel; No. 10 ring shank nails	1	-37.5
8	4	Galvanized steel; No. 10 ring shank nails	2	-80

LIMITATIONS

Installation Over an Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles. The deck shall be solidly sheathed. The minimum thickness of the existing roof deck shall be as required for a new roof panel installation. Note: Inspection of the existing roof deck shall be made before installing the roof panels. The condition of the existing roof deck shall be acceptable to receive the roof panels before the roof panel installation can proceed. Note: A new underlayment installation is required when installing panels over an existing roof covering.

Roof Slope: The aluminum and steel shake roof panels shall not be installed on roofs with a roof slope less than 3:12.

INSTALLATION INSTRUCTIONS

General Installation Requirements – Delta Building Products Installation Guide:
The aluminum and steel shake roof panels shall be installed as specified in this evaluation report and as specified in the manufacturer's recommended installation instructions.

Refer to the Shake Panel Roofing Installation & Reference Guide, published by Delta Building Products Ltd, updated April 15, 2005 for general installation requirements and details.

If a conflict exists between the manufacturer's specified installation instructions and this product evaluation report, then the requirements specified in this evaluation report shall govern.

Roof panels shall overhang the eave as required by the selected eave detail.

Panel Installation Requirements

Underlayment: A minimum of one layer of No. 30 (Type II) or two layers 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 applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions.

Installation: The aluminum and steel shake roof panels shall be secured using clips that are secured to the roof decking with fasteners. The minimum required number of clips and the minimum required number of fasteners is specified in Table 1 for aluminum panels and in Table 2 for steel panels.

Installation of the panels shall begin at the eave. The bottom edge of the panel shall interlock with the starter locking strip. Installation of the panels begins at the bottom left and continues to the right. Each subsequent row of panels will begin at the left.

The panels will overlap of the right side of each panel by 3 inches.

Anchorage: The rear of each panel is secured to the roof deck with the clips and fasteners. The clips shall be evenly spaced along the panels.

Clips: The J-shaped formed metal clips are 2.75" in length and 2.375" in width. Clips for the steel panels are 0.0190" G90 galvanized Grade 33 steel. Clips for the aluminum panels are 0.0276" 3003-H24 aluminum. The required number of clips is specified in Table 1 for aluminum panels and in Table 2 for steel panels.

Fasteners for steel panels: The fasteners are either galvanized No. 10 steel wood screws or galvanized 10 Ga. steel ring shank nails (0.135" shank diameter, $\frac{3}{8}$" diameter head). The fasteners shall be long enough to penetrate into and through the roof deck a minimum of $\frac{1}{2}$ inch. The required number of fasteners is specified in Table 2 for steel panels.

Fasteners for aluminum panels: The fasteners are either stainless steel No. 10 wood screws or aluminum ring shank nails (0.139" shank diameter, $\frac{1}{2}$" diameter head). The fasteners shall be long enough to penetrate into and through the roof deck a minimum of $\frac{1}{2}$ inch. The required number of fasteners is specified in Table 1 for aluminum panels.

The lip of the leading front edge of one panel locks into the lip of the trailing rear edge of another panel.

Trim: Trim shall be installed in accordance with the manufacturer's installation instructions. Refer to the Shake Panel Roofing Installation & Reference Guide, published by Delta Building Products Ltd, updated April 15, 2005, for specific installation details.

Installation Over an Existing Roof Covering: The installation of the aluminum and steel shake roof panels over an existing roof covering shall be the same as the installation of the roof panel to a new roof deck. The fasteners shall be long enough to penetrate through the existing roof covering, through the roof deck a minimum of $\frac{1}{2}$ inch. New flashing shall be installed over existing flashing.

Note: A copy of the Shake Panel Roofing Installation & Reference Guide, published by Delta Building Products Ltd, updated April 15, 2005, shall be available at the job site. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.