TDI | Texas Department of Insurance

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Product Evaluation

RC441 | 0320

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-441

Effective Date: March 1, 2020
Re-evaluation Date: March 2024

Product Name: Kassel Shake Steel Roof Shingles Installed over a Solid Wood Deck

Manufacturer: Kassel & Irons
8510 Industry Park Dr
Piqua, OH 45356
(866) 544-4766

General Description:
Kassel Shake steel roof shingles are designed to simulate the look of wood shakes. Kassel Shake steel roof shingles are constructed of 0.0165" nominal thickness G90 galvanized steel with each full panel measuring 13" wide by 48-1/2" long. Exposure Height: 12"; Exposure Width: 48"; Weight per Square: 100 lb.

Limitations:
Roof Framing: Install the metal roofing panels over a solidly sheathed minimum 15/32" thick plywood roof deck.

New Roof Framing Attachment: The roof framing must meet or exceed the uplift requirements of the IRC or IBC. Install as required for resistance to wind loads.

Design Wind Pressures: Table 1 specifies the design pressure uplift load resistance requirements.

Roof Slope: Do not install roof panels on roofs with a roof slope less than 3:12.

Table 1. Kassel Shake Steel Roof Shingles Installed over a Solid Wood Deck

Design Wind Pressure	Deck Type	Attachment Method
-47.4 psf	15/32" plywood	Secured with three (3) 7-1/4" long steel nail clips per panel. Each clip is attached with three (3) galvanized steel ring shank nails (0.125" shank diameter x 1-3/4" long x 3/8" diameter head).

Installation:

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

Deck: The roof deck must be solidly sheathed with minimum 15/32" plywood.

Underlayment: Minimum of one layer of No. 30 (Type II) asphalt felt must be used. Use underlayment that complies with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. Install the underlayment with minimum 4" side laps and 6" end laps. Apply the underlayment with corrosion resistant tin caps and minimum 12-gauge, 1-1/4" roofing nails. Space the fasteners in accordance with the high wind underlayment installation requirements in the IRC or IBC.

Attachment of Metal Roof Panels to the Roof Deck: Secure the panels to the roof deck with the clip, fastener type and spacing as specified in Table 1. Use fasteners long enough to ensure a minimum penetration of 1/4" below the roof deck.

Panel Ends and End Laps: As required by the manufacturer.

Panel Edges: As required by the manufacturer.

Trims, Closures, and Accessories: Install components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim as required by the manufacturer.

Note: Keep the Kassel Shake Steel Roof Shingles installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.