

Product Evaluation

RC164 | 0622

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-164

Effective Date: June 1, 2022

Re-evaluation Date: June 2026

Product Name: DaVinci Shake, Polymer Composite Synthetic Roofing Shakes Installed Over a Plywood Deck or Wood Boards

Manufacturer: Westlake DaVinci Roofscapes, LLC
13890 W. 101st St.
Lenexa, KS 66215
(800) 328-4624

General Description:

Westlake DaVinci Roofscapes' DaVinci Shake roofing shakes are made from polymeric resins and simulate the look of natural wood shakes. The DaVinci shakes are 22" long and tapered from 1/4" at the tip to 5/8" at the exposed bottom of the shingle. The shakes are suitable for installation with an exposure of 9" or 10". The available widths are 4", 6", 7", 8", and 9", which may be used together to create the appearance of a random sized natural shake roof.

This evaluation report is for roofing shakes that are secured directly to either a minimum 15/32" plywood deck, nominal 1" thick Douglas Fir-Larch tongue and groove wood boards, or nominal 1" thick Douglas Fir-Larch wood boards. Thicker plywood or wood boards may be used; however, the design pressure rating for the roofing shakes will be as specified in this evaluation report.

Limitations:

Design Wind Pressures: The design wind pressure uplift resistance is -93.5 psf.

Roof Framing: Roof framing (rafters or trusses) must not exceed 24" on center.

Installation Over an Existing Roof Covering: Not permitted

Roof Slope: The shakes may be installed on roofs with a roof slope as low as 2:12.

Installation:

Roof Deck: Minimum 15/32" plywood deck, nominal 1" thick Douglas Fir-Larch tongue and groove wood boards, or nominal 1" thick Douglas Fir-Larch wood boards.

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

Underlayment: For roof slopes 4:12 or greater, 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 minimum 2" end laps. For roof slopes less than 4:12, apply two layers of No. 30 (Type II) asphalt felt in accordance with the application method specified in the IRC or the IBC. The underlayment must be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions and the IRC and the IBC.

Attachment of Shakes to Roof Deck: Attach each shake to the wood roof deck with minimum 12-gauge ring shank nails roofing nails with a 3/8" flat head and minimum 1-3/4" length. The fasteners must be either copper, stainless steel, or hot-dipped galvanized. Two fasteners are required per shingle. The fasteners must be placed at the locations indicated on the shake. Ensure that the head of the fastener is flush with the shake surface to avoid creating craters. At valleys, do not secure shake within 5" of the valley center line.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.