

Product Evaluation

RC269 | 0221

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-269

Effective Date: February 1, 2021

Re-evaluation Date: February 2025

Product Name: Top Notch Ridge Tile System

Manufacturer: Ridged Systems, LLC
1455 SW 4th Avenue
Delray Beach, FL 33444
(561) 276-9745

General Description:

This evaluation report covers the Top Notch Ridge Tile System which are extruded plastic ridge profiles supporting concrete and clay tile caps at the ridge. The extruded ridge profiles are available in 2-3/8" w x 4" high and 2-3/8" w x 2-1/2" high, 10'-0" stock lengths.

Installation Instructions and Limitations:

Roof Framing and Roof Deck: Roof framing members shall be in accordance with either the IRC or the IBC. Do not space the roof-framing members greater than 24" on center. Solidly sheath the roof deck with minimum 15/32" plywood. Fasten the roof deck to the roof-framing members in accordance with either the IRC or the IBC to resist the required wind loads.

Roof Underlayment: The underlayment must consist of a two-ply 30/90 hot mop underlayment system.

- The base ply (anchor sheet) of the underlayment system must be an ASTM D 226 Type II (No. 30) asphalt-saturated organic felt. The base ply must be fastened to the wood roof deck with minimum 11-gauge (minimum 0.120" shank diameter) corrosion resistant roofing nails

(smooth, ring, or screw shank) with minimum 1-5/8" diameter tin caps. The fasteners must be long enough to penetrate a minimum of 1/4" through the bottom (underside) of the wood deck.

- The top ply of the underlayment system must consist of one layer of No. 90 ASTM D249 mineral surfaced roll roofing. The top ply must be applied over the base ply by first adhering the top ply to the base ply with a full mopping of ASTM D 312 Type IV asphalt. Next, the top ply must be back nailed to the base ply with minimum 11-gauge (minimum 0.120" shank diameter) corrosion resistant nails (smooth, ring, or screw shank) with a minimum 1" diameter flat head or with minimum 1-5/8" diameter tin caps spaced 12" on center. The fasteners must be long enough to penetrate a minimum of 1/4" through the bottom (underside) of the wood deck.

Attachment of 30/90 Underlayment to Roof Deck:

- The required underlayment design pressure is determined using analysis based on the Building Exposure, the mean roof height of the structure, the location of the structure, and the roof slope of the structure.
- The allowable uplift resistance (i.e., spacing of the fasteners to attach the base ply (anchor sheet) to the roof deck) must be determined by analysis for the type of fasteners specified in this evaluation report. The allowable uplift resistance of the underlayment attachment must be greater than the required underlayment design pressure.

Top Notch Ridge Profile Installation: The 2-1/2" and 4" Top Notch Ridge Profile is adhered to code required underlayment for an approved tile roof covering system with a continuous strip of ICP Adhesives Polyset® AH-160 Roof Tile Adhesive at a rate of 32 grams/ft., 4" width. Apply a bed of adhesive along the ridge and the Top Notch Member is set in the adhesive along the ridge. Apply a continuous strip of adhesive along the top of the rigid member and the roof ridge tile is set on top of the bed of adhesive. Mortar is placed under the tile cap ends in accordance with the manufacturer's installation instructions for an approved concrete or clay tile.

Moment of Resistance: The overturning resistance (moment of resistance) due to wind of the roof tiles based on the installation method for the roof tiles is shown in Table 1.

Table 1: Moment of Resistance Based on Roof Tile Installation Method

Tile Designation	Moment of Resistance
Top Notch Ridge Tile	175 ft-lbs.

Aerodynamic Uplift Moment: The aerodynamic uplift moment for the roof tile is calculated using Equation 16-34 from the 2018 IBC. The aerodynamic uplift moment is calculated based on the mean roof height for the installation and the required wind speed and Exposure condition for the installation location using ASCE 7-16.

Permissible Tile Installation: The roof tiles may be installed if the Moment of Resistance for the roof tile specified in this evaluation report is greater than the Aerodynamic Uplift Moment for the roof tile calculated for the structure location.

ICP Adhesives Polyset® AH-160: The ICP Adhesives Polyset® AH-160 is dispensed using an ICP RTF1000EZ dispensing system. The dispensing system must be operated in accordance with the ICP *RTF1000 Installation and Operating Manual*. Calibration of the ICP RTF1000EZ dispensing system equipment is required before the application of the ICP Adhesives Polyset® AH-160. The mix ratio between chemical "A" and chemical "B" must be within the range of 1.0 A:B to 1.15 A:B.

Note: Keep the manufacturer's installation instructions and the ICP Adhesives Polyset® AH-160 Installation Instructions published by ICP Adhesives and Sealants, © 2016 available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.