

Product Evaluation

RC469 | 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-469

Effective Date: February 1, 2021

Re-evaluation Date: February 2025

Product Name: Languedocienne Two Piece Pan and Cover Barrel Clay Roofing Tiles

Manufacturer: Terreal
45 Rue du Pieu
Les Mureaux, France
33 1 49 97 20 44

Distributor: Terreal North America
4757 Tile Plant Road
Post Office Box 309
New Lexington, OH 43764
(888) 582-9052

General Description:

The Languedocienne is a two-piece pan and cover barrel tile manufactured from natural clay. The clay roofing tiles are available in a variety of colors.

General: The roofing tiles must be installed in accordance with this product evaluation report and the *"Florida High Wind Concrete and Clay Tile Installation Manual,"* 6th Edition (FRSA-TRI Installation Manual).

Mechanical Attachment Only: The Languedocienne barrel clay roofing tiles are to be installed mechanically with fasteners.

Roof Tile Dimensions: The dimensions of the Languedocienne barrel roofing tile that apply to this product evaluation report are specified in Table 1.

Table 1: Roof Tile Dimensions

Tile Designation	Width	Length	Thickness
Languedocienne Barrel Roof Tile (Pan and Cover)	8-3/8" at nose 6-1/16" at head	19-1/2"	1/2"

Limitations:

Roof Slope Limitations: Only install the roof tiles on buildings with a roof slope greater than or equal to 2-1/2:12 but not exceeding 12:12.

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 2.

Table 2: Moment of Resistance Based on Roof Tile Installation Method

Tile Designation	Minimum 15/32" Plywood Roof Deck
Languedocienne Barrel Roof Tile (Pan and Cover)	25.1 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.

Roof Framing and Roof Deck: The roof framing materials and connections must comply with the wind load provisions of either the IRC or the IBC. The roof framing member spacing must not exceed 24" on center.

Solidly sheath the roof deck with minimum 15/32" thick plywood. Fasten the roof deck to the roof-framing members in accordance with the wind uplift requirements as stipulated by the IRC or the IBC.

If the existing roof framing consists of spaced boards, then a solid deck must be constructed using one of the following two options: (1) remove and replace the spaced boards with a solid minimum 15/32" plywood deck or (2) cover the spaced boards with a solid minimum 15/32" plywood deck. Fasten the wood structural panel deck over the spaced boards in accordance with the wind uplift requirements as stipulated by the IRC or the IBC.

Metal Drip Edge: Fasten a metal drip edge to the roof deck with either 11-gauge or 12-gauge roofing nails spaced a maximum of 10" on center. Fasten the underlayment and the drip edge with the same fastener. Use the more stringent fastener pattern.

At the eaves, fasten the drip edge directly to the deck and apply the underlayment over the drip edge. At the gable ends, apply the drip over the underlayment.

Roof Underlayment:

2-1/2:12 Roof Slope to Under 4:12 Roof Slope: Single-ply or multi-ply sealed underlayment system with sealed head laps and side laps. Install the underlayment as specified in either the IRC or the IBC and in the manufacturer's installation instructions as referenced in the FRSA-TRI Installation Manual.

4:12 Roof Slope and Greater: Use one layer of underlayment complying with ASTM D 226, Type II (No. 30 asphalt felt) or equivalent. Lap the underlayment a minimum of 2" at the head laps and a minimum of 6" at the side laps. Install the underlayment as specified in either the IRC or the IBC and the manufacturer's installation instructions.

Roof Tile Installation:

General:

- The Languedocienne barrel clay roofing tiles and the underlayment system must be clean and dry at the time of application.
- Install the Languedocienne barrel clay roofing tiles in accordance with this product evaluation report and the manufacturer's installation instructions.

Roof Tile Fasteners: Mechanically fasten the roofing tiles to the supporting members. Use minimum No. 12-7 x 2" stainless steel bugle head screws. Fasteners must be of sufficient length to penetrate at least 3/4" into (or through) the roof deck.

Pan Tiles: Secure the pan tiles directly to the wood deck with one fastener per tile in the hole in the tile.

Cover Tiles: Secure a pressure treated nominal 2x4 dimension lumber nailer to the wood deck with minimum No. 14-13 x 5" stainless steel bugle head screws spaced a maximum of 16" on center. Fasteners must be of sufficient length to penetrate at least 3/4" into (or through) the roof deck. Secure the tile to the nailer with one fastener per tile in the hole in the tile.

Rake Tiles, Hip Tiles, and Ridge Tiles: Refer to the roofing tile manufacturer's installation instructions for the installation of the rake, hip, and ridge tiles.

Note: Keep the manufacturer's installation instructions and the "*Florida High Wind Concrete and Clay Tile Installation Manual*," 6th Edition (FRSA-TRI Installation Manual) on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.