

TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION RC-205

Effective Date: January 1, 2013

*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 shall be subject to reevaluation **December 2016**.*

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.

MaxiLite P7 and MaxiLite P10 Fiber Cement Corrugated Roofing Panels manufactured by

MaxiTile, Inc. (Mexalit Industrial, S.A. de C.V.)
849 E. Sandhill Avenue
Carson, California 90746
(310) 217-0316

will be accepted for use in areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

General: The P7 and P10 panels are made from a mixture of Type I Portland cement, cellulose, silica, PVA fibers, and color pigments.

MaxiLite P7: The finished panels have six corrugations and measure 39.2 inches wide by 24 inches in length with a thickness of 0.24 inches. The installed weight is approximately 4 pounds per square foot with a head lap of 4 inches and a side lap of one corrugation.

MaxiLite P10: The finished panels have four corrugations and measure 36.7 inches wide by 24 inches in length with a thickness of 0.24 inches. The installed weight is approximately 4 pounds per square foot with a head lap of 4 inches and a side lap of one corrugation.

LIMITATIONS

Design Wind Pressure: The allowable design pressures shall be in accordance with the table below.

Panel Type	Allowable Design Pressure Rating (psf)
P7	-100.5
P10	-106.0

Roof Slope: The roof slope shall be between 3:12 and 12:12.

INSTALLATION INSTRUCTIONS

General: The corrugated panels shall be installed in accordance with the manufacturer's installation instructions and this product evaluation report. All fasteners shall be corrosion resistant as required by the Texas Revisions.

Roof Deck: The roof deck shall consist of a minimum nominal $\frac{1}{2}$ " thick plywood.

Underlayment: A minimum of one layer of No. 30 (Type II) organic felt complying with ASTM D226 shall be installed over the roof deck in accordance with the International Residential Code (IRC) and International Building Code (IBC) requirements. The felt shall be installed with 6 inch side laps and 3 inch end laps. The nailable felt shall be fastened to the roof deck with corrosion resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners shall be applied along the overlaps not farther apart than 36 inch on center.

Fasteners:

- (Concealed fastener) Grip-Rite corrosion resistant ring shank cap nails, $1\frac{3}{4}$ " long x 0.130" shank diameter with a 1" square cap area.
- (Exposed fastener) $4\frac{1}{2}$ " long x 0.175" shank diameter x $\frac{3}{8}$ " diameter head corrosion resistant lag screws with $1\frac{1}{2}$ " square galvanized metal washer with neoprene bushing.

Wind Clip: A stainless steel wire clip, $\frac{1}{8}$ " diameter conforming to ANSI 1075.

Adhesive: Construction grade adhesive (PL Premium Polyurethane) conforming to AFG-01 or ASTM D557 and D3498.

Panels Installation: On gable roofs, before installing the field tile, the trim tile should be installed at the gable. As a general rule, begin by applying field tile at a gable and run toward a valley, hip, or wall. The field and ridge trim tile shall be installed with the laps facing downwind of prevailing wind direction.

Start by installing a full width 6 corrugations panel (4 corrugations for P10) at the lower edge of the gable with an overhang of 1 inch at the gable and 2 inches at the eave (1 inch if gutters). Apply the following tiles in the first course by side lapping one full corrugation.

Place exposed fastener through the top of each corrugation behind the bird stop or in the eave course (first course) into the roof deck, a minimum of 2 inches from the bottom edge. Install the concealed fastener, secured through every other valley of corrugation of the panel located 2 inches from the top edge of the tile panel. Avoid over tightening the fasteners to prevent breakage of tile panel. The fasteners should only be tightened moderately.

As an option, the adhesive can be applied with a 1 inch wide dab of adhesive to the sides of each corrugation and a thick bead on every overlapped corrugation, before laying the next course.

Cut one full corrugation of a field tile and start the second course with this five corrugation tile (3 corrugations for P10). Install the tile with a minimum 4 inch head lap over the previous course and place an exposed fastener on the first corrugation at 2 inches from the lower edge. Apply adhesive and place a full width panel continued until flush with the rake edge.

The third course should be started with a field tile cut vertically in two full corrugations (4 corrugations for P7 and 2 corrugations for P10). The fourth course is installed with a field tile cut vertically in half (3 corrugations for P7). Install the P10 panel with full width 4 corrugations panel continued until flush with the rake edge. The fifth course for P7 is installed with full width panels continued until flush with the rake edge. Repeat steps above until reaching the ridge.

For both P7 and P10 applications, install the concealed fastener at every other valley of corrugation of the panel located 2 inches from the top edge of the panel. Also, install the exposed fastener at the top of every crown corrugation. The wind clip shall be installed at the lower edge of each overlapping corrugation.

Valley Installation: Valley metal should extend 12 inches on each side of the valley. The metal should be of proper gauge (minimum 26 gauge). Valley metal should have at least a 1 inch rise in the middle and be crimped back at the outer edges. It should have a minimum 6 inch head lap. No fasteners should penetrate the metal. Where debris may be a factor, tiles should be held back from the center of the valley to sufficiently allow run off.

Rake Installation: Nail a 2 inch by 2 inch wood member approximately 1 inch from the edge of the roof. The nailer shall be covered with non-perforated Type II (commonly called No. 30) felt in accordance with ASTM D226. Install the rake tile using two corrosion resistant 8d common wire nails (top and bottom). Starting from the eave, apply the field tile over previously installed rake tiles. In most cases a double gable trim system will be needed at one end of a gable roof. For an aesthetic match, plan for a double rake tile at both ends. For flared gables, use a tile pan type metal flashing under the field tile next to the 2 inch by 2 inch nailer. Fasten externally through the rake tile utilizing three nails (one centered) or three screws and washers at each head lap, then cover the fasteners with adhesive.

Hip Installation: Toenail a 2 x 6 wood nailer on the top of the hip rafter after the installation of the field tile. Hold 6 inches back from the edge. Field tile should be cut as close to the nailer as possible. The hip shall be covered with non-perforated Type II (commonly called No. 30) felt in accordance with ASTM D226. Apply mortar into the valley corrugation or use a plastic hip seal (for roof slopes 4:12 to 7:12). The hip tile shall be fastened to the nailer, starting at the eave with minimum 4 inch tile head laps with corrosion resistant 8d common wire nails. Apply a thick bead of adhesive along each vertical head lap. Complete hips before starting the ridge. The lower hip tiles can be closed with mortar, a cutout of a birdstop, or a stack of cutoffs of ridge tiles with mortar between each piece. Fasten externally through the hip tile utilizing two nails (one centered) or two screws and washers at each head lap and cover the fasteners with adhesive.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.