

TAMKO Roofing Products, Inc.
LAMARITE SHAKE

Section 0700

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PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Furnish and install composite shingles and accessories in accordance with TAMKO's Composite Shingle Standards. Roof Support (Structural) Systems are not included in this section.

1.02 SUBMITTALS

- A. Product Data – Submit TAMKO Lamarite Shake Composite Shingle specification and installation guide.
- B. Shop Drawings – Submit small-scale roof plan and details as needed. Indicate details of flashing conditions, anchoring methods and penetrations.
- C. Samples – Submit actual shingle along with sample of color.

1.03 REGULATORY REQUIREMENTS

- A. Comply with all applicable local, state, or national building codes.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. TAMKO Lamarite Composite Shingles should be kept in a dry place and stacked as shipped. It is recommended that Lamarite Shake Shingles be stored in temperatures above 45 degrees F.

1.05 WARRANTIES

- A. Provide 50 year manufacturer's limited warranty against manufacturing defects which result in leaks.

PART 2 PRODUCTS

2.01 APPROVED MANUFACTURER

- A. TAMKO Roofing Products, Inc. (EPOCH Composite Products, a TAMKO company)
P.O. Box 1404
Joplin, MO 64802
Phone: 800 641-4691, FAX: 800 841-1925
- B. Alternative products with physical characteristics identical to Lamarite must be approved in writing by Architect 14 days prior to General Contractor Bid Date.

2.02 COMPOSITE SHINGLE MATERIALS

- A. Shingle Description: Lamarite Shake Composite Shingles are manufactured from colorized mineral filled polymer. Lamarite Shake Composite Shingles simulate the look of wood shakes. Lamarite Shingles are available in three sizes, 18" x 12", 18" x 7" and 18" x 5" and are suitable for installation with exposures of 7", 7 1/2", and 8".

2.03 ACCESSORY PRODUCTS

- A. Underlayment: General Requirements
Moisture Guard Plus – TAMKO’s fiberglass reinforced self-adhering SBS modified asphalt underlayment with fine mineral surfacing.
TW Metal & Tile Underlayment – TAMKO’s fiberglass reinforced self-adhering SBS modified asphalt underlayment with polymeric film surfacing.
TAMKO NO. 30, NO. 30 UL, or NO. 30 ASTM organic felt underlayments.
TAMKO Nail Fast, SBS modified organic utility underlayment.
Non-perforated asphalt saturated organic felt that meets the requirements of ASTM D 226, Type II.
- B. Flashing Metal: 26 gauge
- C. Nails: Corrosion-resistant, 3/8” head x 1 ½” length, roofing nails
- D. Sealant: Contractor grade one part urethane sealant

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Color Variation: All Lamarite Shake Composite Shingles come with shade variation. Shade variation may occur differently from pallet to pallet. Application of the Shingles should not begin until ALL material has been delivered to the project site. Shade variation has been designed into the Shingles to provide a more realistic, random appearance. Because of shade variation the applicator must take precautions to ensure that the various shades of the Shingles are properly blended on the roof. Mix Lamarite Shake Composite Shingles from different pallets and bundles while installing to help assure randomness in the finished application. **The applicator must periodically check work in progress from the ground to make sure that a color pattern does not occur.** Lamarite Shingles are intended to have random shade variations when installed.
- B. Application Temperature: Although temperatures below 45 degrees F. will not harm Shingles, cold temperatures may cause difficulty with the installation, including increased breakage during fastening. **If Lamarite Shingles have been stored in temperatures below 45 degrees F., it is recommended that the Shingles be restored to a temperature above 45 degrees F. prior to installation.** Lamarite Shingles will expand and contract with heat and cold and must be properly spaced to avoid buckling. Lamarite Shingles have been designed with spacer tabs on the sides to help assure proper spacing. It is recommended that Lamarite Shake Shingles be stored in temperatures above 45 degrees F.
- C. Nailing and Cutting: Lamarite Shingles are for application to roof decks capable of receiving and retaining nails that penetrate ¾” into the roof deck. **Each Shingle**

should be applied with two corrosion-resistant, 3/8" head x 1-1/2" length, roofing nails using a pneumatic nail gun set to 100 psi. Do not allow the end of the nail gun to punch the product. Do not use staples. Drive nail heads flush with the shingle surface. Frequently check both the depth and pressure setting on the nail gun so nails are not over-driven. Over-driving nails may cause Lamarite Shingles to lift and will adversely affect the appearance of the roof. Lamarite Shingles can also be hand nailed using two corrosion-resistant roofing nails.

To cut a shingle, it is recommended to score the back side of the shingle with a utility knife or comparable tool. Alternatively, a circular saw with a carbide blade (two teeth per inch) can be used to cut the shingle. When using a cordless circular saw a minimum of 18 volts is recommended.

High Wind Areas/Zones, Fastening Application

Standard roofing nails or ring shank roofing nails (3/8" head x 1-1/2" length) can be used for high wind area/zone applications depending upon jurisdiction, check local building code requirements.

Nail Placement: Maximum shingle exposure 7": place nail 1-1/2" below center of standard nailing location. Use two nails per shingle.

Important: Check Local Codes for applicable Product Testing and deck assembly requirements.

The following assembly was used to test for compliance with ASTM D 3161, Class F (110 mph), nominal 3/4" thick AC plywood deck, shingle underlayment, 1-1/2" roofing nails, two nails per shingle.

The following assembly was used to test for compliance with UL 580 to obtain a Class 90 uplift resistance rating and for compliance with UL 1897 to obtain a 165 psf uplift resistance rating. Wood supports (Joists or Rafters) Nominal 2" x 10" deep wood framing members, No. 2 grade Spruce-Pine-Fir, 24" OC spacing. Deck: minimum 15/32" B-C APA Rated plywood sheathing. Fasteners (Screws) used to attach the plywood deck to the joists, 2" long, No. 8 course thread screws. Screw spacing 6" OC at the plywood edges and 12" OC in the field of the plywood. Underlayment, nailed 4" at side laps. Fasteners used to attach the shingles to the plywood deck, 1-1/2" long galvanized ring shank nails spaced 8" from the butt end of the shingle and 2" from the edge of the shingle. Two nails used for each shingle. Exposure of the shingles: 7-1/2".

- D. Roof Deck: Lamarite Shingles are for application to roof decks with slopes of at least 3" per foot. For roofs having slopes of 3" per foot to 6" per foot, TAMKO's self-adhering Moisture Guard Plus or TAMKO TW Metal & Tile Underlayment must be applied over the entire deck.

New Roof Deck: Roof decks must be smooth, dry, and free from warped surfaces. Metal drip edges should be installed at eaves and rakes.

Plywood: All plywood must be exterior grade as defined by the American Plywood Association. Plywood must be a minimum of 15/32" thick and applied in accordance with the recommendations of the American Plywood Association.

Sheathing Boards: Boards must be well seasoned, tongue and groove boards and not over 6" nominal width. Boards must be a 1" nominal minimum thickness. Boards must be properly spaced and nailed to provide a smooth, flat surface and prevent buckling.

Reroofing: In reroofing applications the old roofing must be completely removed. Damaged roof decking, metal drip edges, and flashing must be repaired or replaced and irregularities removed to provide a smooth, flat surface.

- E. Metal Flashing: Metal valleys and flashings should be used where water is channeled off the roof or where the roof abuts a vertical wall, dormer, pipe, or chimney to help prevent leaks. Structural members that protrude through the roof should be flashed at all intersecting angles. Step flashing up the vertical surface of walls and chimneys should extend under each successive course of Lamarite Shake Shingles, and should be covered by a layer of counter flashing. Metal valleys and flashing should be a minimum of 26-gauge metal.

It is important that metal flashing have the same serviceable life span as the Lamarite Shingles installed on the roof. TAMKO is not responsible for leaks attributable to metal valleys, flashings, their installation or the lack of installation.

- F. Ventilation: To help insure adequate ventilation and circulation of air space, place louvers of sufficient size high in the gable ends and install an adequate number of roof vents and soffit vents. FHA minimum property standards require one square foot of net free ventilation area for each 150 square feet of space to be vented, or one square foot per 300 square feet if a vapor barrier is installed on the warm side of the ceiling or if at least one half of the ventilation is provided near the ridge. If ventilation openings are screened, the total area should be doubled. Further information on proper ventilation is available by contacting the architect, building contractor, building material's supplier or material manufacturer.

3.02 INSTALLATION

- A. Underlayment: An underlayment must be applied over the entire deck before installation of the Lamarite Shingles. Dust, dirt, loose nails, protrusions, all old shingles, and roofing felt must be removed from the roof deck prior to application of the underlayment. Apply the underlayment only in fair weather when the air temperatures are above 35 degrees F. and the deck is dry. Align the first course of the underlayment on the lower edge of the roof, parallel to the eaves.

Install successive courses from low to high point, lapping each course 3-1/2" over the lower course so that laps will shed water. End seams should be overlapped 6" and staggered so that end seams in one course do not align with end seams in an adjacent course.

TAMKO's Moisture Guard Plus or TW Metal & Tile Underlayment should be applied to eaves, rakes, ridges, valleys, around chimneys, skylights or dormers, and in areas where there is potential for water to back up due to wind driven rain or ice damming.

For a UL Class A Fire Rating: Install Lamarite over either 1.) One layer of Moisture Guard Plus – TAMKO's fiberglass reinforced self-adhering SBS modified asphalt underlayment with fine mineral surfacing, or 2.) One layer of TW Metal & Tile Underlayment – TAMKO's fiberglass reinforced self-adhering SBS modified asphalt underlayment with polymeric film surfacing.

For a UL Class C Fire Rating: Install Lamarite over either 1.) One layer of TAMKO No. 30, No. 30 UL, or No. 30 ASTM organic felt underlayment, 2.) One layer of TAMKO Nail Fast SBS modified organic utility underlayment or 3.) One layer of non-perforated asphalt saturated organic felt that meets the requirements of ASTM D 226, Type II.

If left exposed, underlayment may be adversely affected by moisture and weathering. Underlayment and Lamarite Shake Shingles must be applied together.

- B. Starter Course, Preformed Starter: Begin by cutting the preformed starter into two 10" x 6" pieces (discard one piece) install the remaining 10" x 6" piece so that it extends 1/4" over both the rake and eave edges when using Style D metal drip edge or 3/4" to 1" when using Style A metal drip edge with its short dimension parallel to the eaves' edge. Install full size 10" x 12" preformed starter across the eave maintaining the correct eave overlap, use two corrosion resistant roofing nails (3/8" head and 1-1/2" in length). Important: As you work along the eave, leave a 1/4" space between the starter pieces.
- C. Shingle Application: Important: Spacer tabs are manufactured into the side edges of Lamarite Shingles to insure the proper 1/4" spacing. The tabs should be clipped only from exposed edges. Do not clip the tabs between adjacent Shingles. Failure to properly space Lamarite Shingles may result in buckling and will adversely affect the appearance of the roof. Frequently check both the depth and pressure setting on pneumatic nail guns so nails are not over driven. Over-driving nails may cause Lamarite Shingles to lift and will adversely affect the appearance of the roof.

When the starter courses are complete, clip spacer tabs from the outside edge of a Lamarite Shake Shingle. In addition, for non-gable roof planes, the outside edge of Shingles along the hip must be cut to match the angle of the hip. Place the first

Shingle directly on top of the starter course, aligning the edges with the bottom and rake or hip edges of the starter shingle. Fasten each full Shingle with two corrosion resistant 3/8" head x 1-1/2" length roofing nails. Place one nail in each of the appropriate nailing locations (two nails maximum per Shingle). Continue installing Shingles across the roof, aligning the bottom of each Shingle with the bottom of the starter course.

To begin the second course of Shingles, cut one Lamarite Shake Shingle into two 18" x 6" pieces. Begin the course with the 6" piece with the spacer tabs on the inside edge and the cut/sawed edge on the outside. Align the exposure marks on the side of the Shingle with the top edge of the underlying Shingle to create the proper weather exposure. Continue to install full size Lamarite Shingles across the roof. When Shingles are uniform exposure and properly installed the exposure marks will align with the tops of the Shingles below and horizontally with the exposure marks on the adjacent Shingles.

The third course of Shingles should begin in the same manner as the first, with a full size Shingle. Alternate courses using full size Shingles and 18" x 6" pieces as the first Shingle in each successive course to prevent the spaces between the Shingles in one course from aligning with the spaces in adjacent courses.

When using 5", 7", and 12" sizes, alternate the size of the first Shingle in each successive course to prevent the keyways between Shingles in one course from aligning with keyways in previous courses. The keyways should be offset a minimum of 2". Occasionally you will be required to cut a custom size shingle. When doing so make sure to leave the cut edge smooth.

Note: If chalk lines are used, do not use permanent chalk as it may adversely affect the appearance of the roof. As work progresses up roof slopes care should be taken to minimize traffic over completed areas. Dishwashing or clothing detergent may be use in combination with water and a soft bristle brush to remove mud or dirt tracked on the Shingles during installation.

- D. Hip and Ridge Application: Using one of the recommended underlayment products, fasten an 8" wide cap over all hips and ridges so that one half of the cap underlayment rests on each side of the hip or ridge. Apply a double layer underlayment cap if a non-SBS modified asphalt underlayment is used.

Preformed Hip and Ridge: Cut a 10" long piece from a Lamarite prefabricated Hip and Ridge Shingle to use as a starter Shingle. Fasten the 10" piece to the lowest point of the hip or ridge, opposite the direction of the prevailing winds for the area, using two corrosion-resistant roofing nails of sufficient length to penetrate 3/4" into or completely through the decking. One nail should be placed in each of the appropriate nailing locations (two per Shingle). Fasten a full size Lamarite Hip and Ridge Shingle directly over and completely covering the 10" starter Shingle.

Continue installing full size Hip and Ridge Shingles along the hip or ridge with the same weather exposure (7", 7-1/2", or 8") as the field of the roof.

Site-made Hip and Ridge: Construct from a Lamarite Shingle by cutting the Shingle in half to yield two 18" x 6" pieces. The two halves are applied by butting the cut edge of one half to the bottom side of the other half, and nailing in the appropriate location marked on the Shingle. The side of the Hip and Ridge Shingle with the exposed cut edge should alternate as each Hip and Ridge Shingle is fastened. Shingle spacer tabs located on the edges of the site made Hip and Ridge Shingles should be removed prior to application. Intersecting roof surfaces at hips and ridges must be properly capped to help prevent leaks. Do not walk on Hip and Ridge once it has been applied as it may cause buckling or breakage of Hip and Ridge pieces.