



Polymeric Slate **Tile Roof System**

This installation guide is written and provided for the use of professional roofing applicators and EcoStar™ Gold Star Authorized Applicators. Contact the Technical Department for information on warranty availability and the requirements and benefits of the Gold Star program.

SPECIAL NOTE

Majestic Slate™ has been tested and listed by Underwriters Laboratories as a Class C roofing material (U.L. 790). Majestic Slate has been tested and listed by Intertek Testing as a Class 4 hail resistant product (U.L. 2218). To meet the requirements of these tests and their listings the roof system must be installed per this guide.

WARRANTIES

EcoStar warrants this product to be free of defects in workmanship and materials at the time of shipment from EcoStar's factory. EcoStar will at its option either replace or refund the purchase price of any product found to be defective hereunder.

EcoStar's limited warranties are the only warranties extended by EcoStar with respect to its materials. There are no other warranties, including the implied warranties of merchantability and fitness for a particular purpose. EcoStar specifically disclaims liability for any incidental, consequential, or other damages, including but not limited to, loss of profits or damages to a structure or its contents, arising under any theory of law whatsoever.

The dollar value of EcoStar's liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the EcoStar material in question.

COLOR VARIATION

All tiles come with a shade variation. This shade variation may occur differently from pallet to pallet. Application of the product should not begin until **ALL** material has been delivered to the project site. The shade variation has been specifically designed into the product to provide a more realistic appearance to the product. Because of this shade variation the applicator must take precautions to insure that the various shades of the product are properly blended. Tiles must be taken from different pallets and bundles to guarantee consistency in application. The applicator must periodically check work in progress from the ground to make sure that a pattern in color does not occur. This product is meant to have a random appearance in shade variations.

NOTE: EcoStar will not be responsible for the improper blending or application of the product.

TEMPERATURE

It is recommended that the tiles not be stored in temperatures lower than 45° F., since cold tiles will cause difficulty with the installation. If tiles have been stored in temperatures below 45° F., it is recommended that the tiles be restored to a temperature above 45° F. The tiles will expand with heat and cold. If the tiles are applied while cold, special precautions must be taken to insure a quality looking application. The tiles should never be installed directly adjacent to each other. For assistance with installations below 45° F. please contact the Technical Department.

SUBSTRATE

The tiles should only be installed on a minimum of 1/2" plywood decking or a minimum of 1" solid wood decking. Contact the Technical Department for approved alternatives. Under all circumstances existing roof materials must be removed down to the deck, prior to installation.

SLOPE

The tiles are not recommended for slopes less than 3/12. If this is desired, contact the Technical Department for review. On roofs less than 6/12 and greater than 3/12, the tiles must be installed with a maximum exposure of 6". On roofs greater than 6/12 the tiles may be installed with 6", 6-1/2" or 7" exposure.

UNDERLAYMENT

Prior to installation **Glacier Guard™** must be applied to the deck surface. For a Class C listing, U.L. listed 30 lb. felt, or equal, must be used. **Glacier Guard** is placed at eaves, rake edges, hips, valleys and projections. If EcoStar brand underlayments are used, they are included within the terms of the warranty. **Gold Star Warranty** application requires the use of EcoStar's **Aqua Guard™** underlayment and **Glacier Guard**.

FASTENERS

Copper or stainless steel roofing nails are recommended for application of the tiles. If **EcoStar Fasteners™** are used they are included within the terms of the warranty. **Gold Star Warranty** application requires the use of **EcoStar Fasteners**. Hand drive and pneumatic coil nails are available.

FLASHING MATERIAL

EcoStar recommends that flashing be either copper or stainless steel. Flashing metal, however, is not covered by any EcoStar warranty.

Premium Roofing **Premium Performance™**



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INSTALLATION STEPS

EcoStar makes every effort to maintain the quality and consistency of all products, however, shade variations will occur within all tile products. This variation is more pronounced between different production runs of the product. Due to these shade variations it is extremely important that all members of the installation crew be aware of the fact that tiles must be blended between bundles and pallets. The entire lot of material must be blended evenly in rotation until all material is used. EcoStar recommends that a member of the crew be assigned the responsibility of blending tiles and insuring that no shade patterning or blotching occurs. This can best be accomplished by making periodic inspections of the roof from the ground.

Majestic Slate tiles are designed and manufactured to duplicate the look and feel of natural slate including the variations in color and texture.

1. Install **Glacier Guard** in all valleys, eaves, rake edges, hips, ridges, and projections. **Gold Star Warranty** application requires the use of **Glacier Guard**.

2. Install a minimum of 30 lb felt over the remaining area of the deck surface. If a Class C roof is required, the 30 lb felt or equal, must be U.L. listed. **Gold Star Warranty** application requires the use of EcoStar's **Aqua Guard** underlayment.

3. Install metal starter strip at eaves and rake edges. Any corrosion resistant metal flashing is acceptable. Copper and stainless steel are recommended. It should be noted that metal flashing is NOT covered by any EcoStar Warranty. Note: When using copper and stainless steel flashing material the appropriate corresponding nails should be used.

4. Beginning at the eave edge, install a layer of tiles with two nails per tile (in location shown on tiles). 1-1/2" long copper or stainless steel roofing nails are recommended. When EcoStar brand nails are used they are covered by the EcoStar Warranty. **Gold Star Warranty** application requires the use of **EcoStar Fasteners**.

5. If a pneumatic nailer is utilized for application of the tiles, care should be taken to determine that the proper pressure and depth setting is being used. Nails can be over driven causing tiles to lift and diminish the quality of the installation.

6. The initial layer of tiles becomes the starter row. This layer will be completely covered by the next row to be installed. The starter row may be installed either front side up or back side up. This is determined by the type of edge metal being used. When the second layer of tile is installed, tiles must be offset at least half a tile to cover the nails from the previous row.

WHEN THE ROOF SLOPE FALLS BELOW 6/12 PITCH, A 6" EXPOSURE MUST BE USED. ABOVE 6/12 PITCH 6", 6-1/2" AND 7" EXPOSURE MAY BE USED.

7. **Caution:** During shipping and storage some tiles will become curled in an upward direction. Do not install the tiles with the upward curl. Whatever position the tile is in when fastened to the roof deck, it will maintain that position. It is recommended that each member of the installation crew be instructed on how to bend the tile manually to insure that it lays flat when fastened to the roof deck.

8. As the tiles are installed up the roof, the tile must be cut at rake edges, valleys and projections. The tiles may be cut using a straight edge and a utility or roofing knife. Once the tile has been scored with a knife it can be snapped along the scored line. A circular saw may also be used for cutting the tiles.

9. As the tiles are installed up the roof slope, it is recommended that lines be snapped both horizontally and vertically. The horizontal lines will keep the tiles looking straight and uniform. The vertical lines will keep the space between the tiles in line from row to row.

10. CAUTION: As the tiles are installed up the slope of the roof they should be constantly checked so that there is no patterning and proper blending is occurring. **Gold Star Warranty** application requires that the Authorized Applicator correct any blending problems prior to issuance of the warranty.

11. Continue to install the tiles up the roof slope. Be sure to place the nails in or directly adjacent to the position noted on the tiles. Nails can be any corrosion resistant roofing fastener, but copper and stainless steel are recommended. If **EcoStar Fasteners** are utilized they will be covered by the warranty. **Gold Star Warranty** application requires the use of **EcoStar Fasteners**. At no time should any tile be placed directly adjacent to any other tile. A minimum of 3/8" is required between tiles. A larger gap may be used when needed.

When using pneumatic nailing equipment, frequently check both the depth and pressure setting, so nails are not over driven, causing tiles to lift. Lifted tiles will diminish the aesthetic appearance of the finished roof system.

Tiles can be slippery when wet, caution should be exhibited with early morning dew and after rain. EcoStar suggests the use of toe boards, OSHA approved harnesses and safety equipment at all times.

12. As work progresses up roof slopes care should be taken to minimize traffic over completed areas of the roof. The tiles will show any mud or dirt tracked across them. This will cause problems with the completed appearance of the roof. It is the responsibility of the applicator or building owner to remove this mud or dirt. A mild detergent should be used in combination with a bucket of water and soft bristle brush to remove the mud or dirt. Clean water can then be used to finish the cleaning process. Do not use any chemicals or solvents without first checking with the Technical Department.

13. When all tiles have been applied to the roof slopes, the pre-formed ridge tiles are applied to all hips and ridges. Hip & ridge tiles are always installed with a 6" exposure. At the same time the ridge tiles are being installed, roof venting should be installed. Ridge venting systems are highly recommended. Mushroom cap style vents may be used, but ridge venting provides better venting and improves the aesthetic appearance of the roof system. **Gold Star Warranty** application requires the use of EcoStar **Attic Guard™** for ridge ventilation.

14. Upon completion of the installation it is recommended that all debris and dirt be cleaned off the roof system. When cleaning the roof tiles DO NOT USE CHEMICALS OF ANY KIND! EcoStar recommends that the roof be cleaned using water and a mild detergent. Clean the tiles using a soft bristled scrub brush. Please note that EcoStar is not responsible for cleaning of the tiles.

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PRODUCT IDENTIFICATION

This area provides identification of the product and a toll free contact telephone number for questions or assistance with the product and installation.

IMPORTANT INFORMATION

This area of the tile provides pertinent information about installation and the need to use a trained applicator to install the product.

QUALITY INFORMATION

This area of the tile is used by the production department to denote the date the part was manufactured. This allows tracking of quality by production time.

INSTALLATION MEASUREMENT

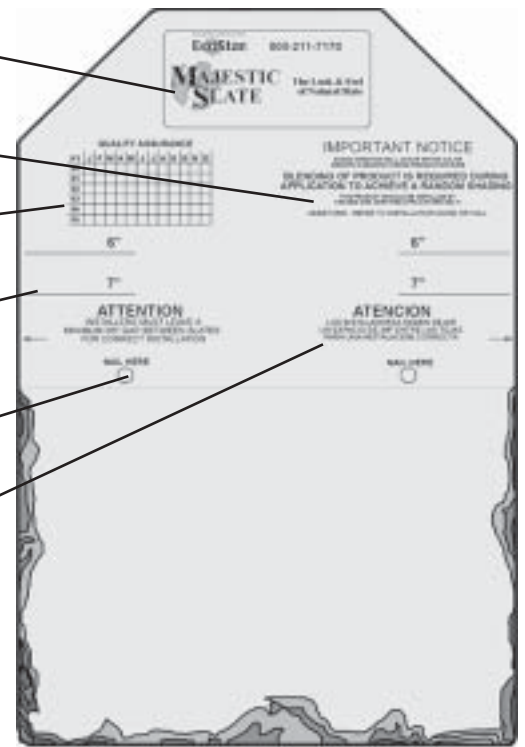
Two marks are molded into every tile. When these marks are placed in alignment with the top edge of the previous row of tiles, proper tile exposure is provided automatically.

TILE FASTENING

Molded into each tile is a fastener locator. This assists during installation for proper positioning of the fastener.

GAP

During installation the tiles must be placed a minimum of 3/8" apart. Tiles must never be installed directly adjacent to each other. This area of the tile states this in both English and Spanish.



Majestic Slate - Traditional Design
12" w x 18" long

Majestic Slate
Chisel Point Design

12" wide x 18" long



Majestic Slate
Beveled Edge Design

12" wide x 18" long



Majestic Slate
Beaver Tail Design

12" wide x 18" long



Majestic Slate
Colonial Design

10" wide x 16" long

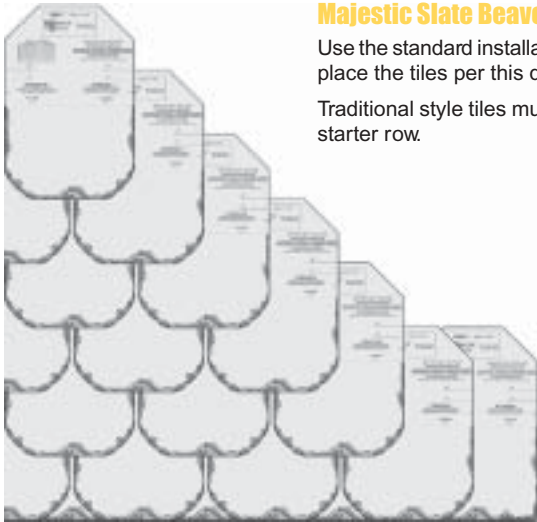


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Majestic Slate Beaver Tail Design

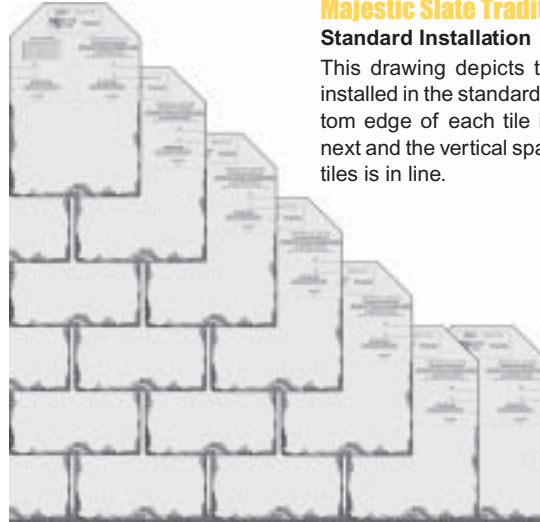
Use the standard installation methods and place the tiles per this drawing.

Traditional style tiles must be used as the starter row.



Majestic Slate Traditional Design Standard Installation

This drawing depicts the traditional tile installed in the standard method. The bottom edge of each tile is in line with the next and the vertical spacing between the tiles is in line.



Majestic Slate Chisel Point Design

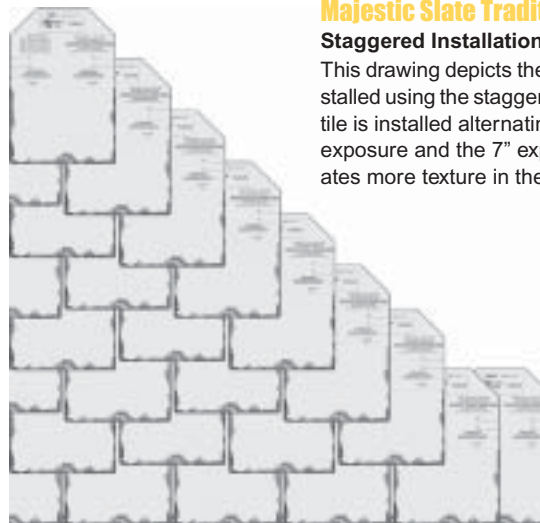
This design can only be put down using a 6" exposure. The design will not accommodate any other exposure. The installed product should look like this drawing.

Traditional style tiles must be used as the starter row.



Majestic Slate Traditional Design Staggered Installation

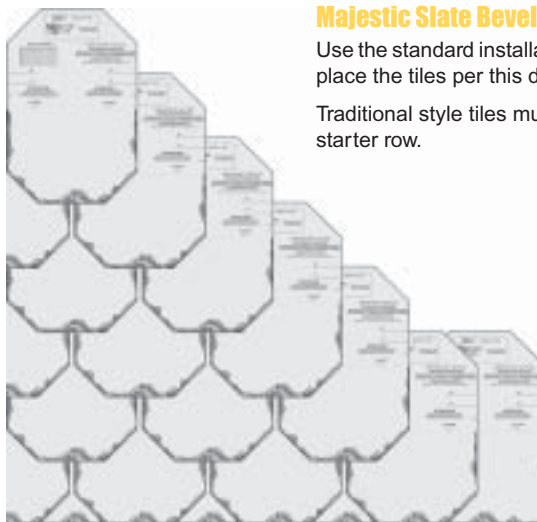
This drawing depicts the traditional tile installed using the staggered method. Each tile is installed alternating between the 6" exposure and the 7" exposure. This creates more texture in the roof system.



Majestic Slate Beveled Edge Design

Use the standard installation methods and place the tiles per this drawing.

Traditional style tiles must be used as the starter row.



Majestic Slate Traditional Design Offset Installation

This drawing depicts the traditional tile installed using the offset method. Each tile is installed by moving it 1" to each side of the center line. This method creates a roof system that makes the tiles look different sizes.

