

Enviroshake®

Quality Engineered Roofing

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Installing

Enviroshake® APPLICATION INSTALLATION GUIDELINE

This Guideline and Installation Diagram have been designed for printability for your convenience. To ensure this we have maintained the image quality. With some internet connections this may take up to 15-20 seconds to download. Thank you for your patience.

[View the Installation Video](#)

Warning: Do not proceed with installation of the Enviroshake® roof until you have thoroughly read these instructions and reviewed the installation diagrams. If you have any questions or concerns related to the installation procedures outlined below, please call our toll free number (1.866.423.3302) for assistance **BEFORE** starting your project. An installation video is available for viewing online at www.enviroshake.com or by calling the toll free number. Enviroshake is not responsible for any costs incurred by the customer associated with improper installation procedures.

Storage: Enviroshake® needs to be stored in a covered dry location and can be stored in the original factory shrink-wrap outdoors for up to 6 months. If the product is stored in a location where the product becomes submerged in water from rain run off, the product can become stained and the warranty is voided. If the product is stored outside for longer than 6 months the UV protected shrink-wrap will start to break down and the product will start to weather prematurely.

Enviroshake® bundles are packaged 13 pieces per bundle – 10 bundles = 100 square feet when installed at a 9” maximum exposure. Enviroshake® is packaged with 70 bundles per skid. As a rule, Enviroshake recommends adding 10% to “take-offs” for simple roof structures, and more for complicated roofs.

- Enviroshake® is designed to replicate the look of natural weathered cedar. No two shakes are exactly alike and will vary in thickness (+/- 20 %) and shading due to the unique materials and manufacturing process employed by Enviroshake.
- Do NOT stack material or another skid on top of ridge caps.
- SC shakes are bundled with white wrapping/strapping, and AC shakes are bundles with green wrapping and yellow strapping.
- Storage and transportation shakes may cause some shakes to lift upwards slightly. A tolerance level of ½ inch is acceptable. To assist in helping the shakes lay down you can Nail where indicated by circles “O” on the nailing strip of shake – do not nail lower than a minimum 10” from the butt end.
- IF THERE IS ANY SHAKE DAMAGED OR OUTSIDE THE ABOVE TOLERANCE DO NOT INSTALL ON FLAT ROOF SURFACES. USE IN VALLEYS, CORNERS, ETC, WHERE CUTTING IS REQUIRED.
- **You do not need to split shakes prior to installation** – you can nail down without splitting (4 nails per) and this will give you the desired look of a split shake course. If you need to split – this can be accomplished by snapping by hand in a quick motion – or by taking a knife and scoring the crease in the keyway and snapping.
- Enviroshake has 8 profiles, which are randomly factory shuffled into bundles. A bundle may have up to a maximum of 8 profiles and no less than 4 profiles due to the manufacturing process. Given this randomness, it is up to the discretion of Enviroshake as to the number of profiles that are packaged in each bundle.

As a composite product that is manufactured to replicate the look of a “weathered” cedar roof, the shakes will fade over time once installed, and will demonstrate a variance of grey color shades from dark grey to light grey similar to an aged cedar roof. This is an ongoing process over time and the transition will vary between regions and will vary between individual shakes. Over time this will even out, but there may still be variations so as to maintain the “weathered” look.

Enviroshake® Ridge Caps are designed to accent the roof, therefore they may be a colour tone darker or lighter than the Enviroshake® roofing pieces.

The installer should be aware of potential color variations between die lots when installing. The installer should ensure that the date codes on the back of the bundles are from the same time frame, if there are bundles with different date codes they should be set aside and used on a defined roof area where there is enough material to cover this area or as a starter row to avoid having a potential sight line on the roof where the old and new product join. Never mix old product from another project with new product on a new project. Do not start a roof area unless you have confirmed that you have enough product on site to finish the area. If you run out of material you will need to hand shuffle the old material with the new material to avoid the potential for a sight line on the roof caused from a tone variation in the two die lots. For this reason, always leave the smallest roof area to the last to finish.

Upon finishing each roof area the contractor should stand back to view the roof and ensure that there are no visually un appealing aesthetics caused by the installation, prior to proceeding to the next roof area. Failure to do so and to install product with colour variation will leave the contractor liable for the labor and material required to fix such a problem.

Enviroshake® is designed to weather to a lighter grey tone once installed on the roof. Given this, it is important that when a roof area is started, it is also completed in a timely manner. Do Not start a roof area that you are not able to complete due to the roof area not being prepared or due to a lack of material on hand. If this happens and you install un-weathered product at a later date beside the existing weathered product on the roof, there will be a color disparity, and there will be a visible difference that may not go away over time.

Due to the manufacturing process some shakes may have unfilled top corners. This material is acceptable as Enviroshake **does not need head lap** and this does not affect the performance or wind rating of Enviroshake. (Miami Dade tested to 185 mph)

Do not begin installation until you have received your order in its entirety.

Enviroshake recommends that snow guard devices be installed in conjunction with Enviroshake® in areas where there is a risk of snowfall accumulation and the possibility that a build-up of snow could slide off the roof causing inconvenience or harm to life and property. Please consult with your roofing contractor regarding the risk factor in your area and the appropriateness of installing these devices on your home.

The following is intended as a guide to the installation of Enviroshake®. Where applicable, local building code requirements will always take precedence and must be adhered to.

Caution – Do not walk on an Enviroshake® roof when moisture/frost is present as surface will be slippery and greatly increases the risk of a slip and fall.

GUIDELINES

Enviroshake® is typically installed in straight, single courses at a maximum 9” exposure, however Enviroshake® can be installed at exposures as low as 5” or in staggered courses.

It is not required that you split the profiles unless necessary to complete a row. When breaking the shake profile, snap quickly to encourage a cleaner edge or use a knife to score the material prior to snapping.

- Enviroshake recommends installing on 5/8” plywood. Enviroshake does not recommend installing on OSB. *Note: For rafters spaced 20 or more inches apart, 1/2- or 5/8-inch plywood is recommended. The most common rafter spacing is 24 inches, and 5/8-inch plywood is recommended for that.*

- Enviroshake® requires a minimum 3/8" space gap between all shakes.
- Minimum 1 ½ " large head ring shanked roofing nails are required. They can be hot dipped galvanized roofing nails or stainless steel roofing nails (304 or 316). Enviroshake recommends stainless steel nails. A power-nailer is suitable for use in installation on field shakes but not recommended for caps. Nail where indicated by the circles "O" on the nailing strip of shingle. If installing on a roof where the underside of the roof deck will be visible (ie. a vaulted ceiling), minimum 1 ¼" nails (or screws) can be used on field shake to ensure they do not protrude through the decking.
- Nail where indicated by the circles "O" on the nailing strip of shake
- Nails must be fully covered by shakes and not visible in joints.
- Where applicable, only a "pure silicon" sealant should be used to cover up exposed nail heads or to seal joints on ridge caps. The sealant should be colour matched to the weathered light grey colour of Enviroshake®.
- Every field shake receives 4 nails
- Every cap receives 2 screws. Enviroshake recommends pre-drilling holes for screw placement
- It is important that the head of the nail not be driven below the top surface of the shake at any time. If you are using a power-nailer, adjust the setting to prevent this situation from occurring –very important during cold weather installations.
- Enviroshake® should not be installed in temperatures beyond -20 degrees C / -4 degrees F
- The joint between 2 shakes in one course should never be closer than 1 ½" to a joint below or above it.
- Shakes must be cut in order to fit properly around vents, in valleys, and beside flashing. Shakes should be cut with a circular saw for straight lines or with a jig saw for curves.
- Always use an uncut factory edge along rake/gable ends.
- As a rule – never install more than 2 "full" 12" profiles side by side before using 1 of the other 5 profile pieces.
- Do NOT use set "staircase pattern" which is created when using same setback and all full pieces.
- A Synthetic underlay is required for underlayment. Enviroshake supplies a peel and stick synthetic peel and stick underlayment, Enviroshield, for each project. **Enviroshield is required for the Gold Warranty*
- Enviroshield or a 36" ice/water barrier membrane is used on eaves, valleys, rakes, hips and ridges
- Ridge caps are installed at a maximum of 9" of exposure and are fastened with 2 screws (min. 2 1/2"). When using ridge caps with ridge vents the slope of the ridge cap should be 1 less than the roof slope (ie. if it's a 7/12 slope on the roof and you're installing over a ridge vent - order 6/12 ridge caps).
- Shuffled loads are like "die lots". Enviroshake recommends that the installer **DOES NOT** start one elevation with one shuffled lot# and finish with another. It is recommended that any leftover material then be used for starters or hips and ridges, OR shuffle them in with the next lot to be applied.
- Enviroshake recommends that the installer complete one roof section at a time with shuffled material before moving on to the next section.
- If installing on a 2/12 roof, this is considered low slope and Enviroshake recommends installing as per our low slope installation addendum.
- If a Class A roofing system is required, Enviroshake recommends installing as per our Class A system installation addendum.
- If installing on a turret, do not use full shakes, use split shakes to best accommodate the curve
- If installing on a curved roof, you may have to drop the exposure through the transition area

INSTALLING SHAKES

Underlayment

Before applying the Enviroshake supplied peel and stick synthetic underlayment (Enviroshield), nail metal drip edge along the eaves. Cover the **entire** roof deck with Enviroshield. After the underlay is laid, nail drip edges along the rakes. Cap nail the top edges of the underlay strips into the roof deck every 3 feet, or as required by weather conditions.

If not using Enviroshield, and not using a peel and stick underlayment, then an Ice/water barrier material (36 in.) must then be installed along the eave of the roof as per local building code. The bottom edge of the synthetic underlayment must be overlapping the ice and water barrier by 4".

Starter Course (Always gap the starter row, as you would do the entire roof- 3/8" gap between the starter row shake)

Cut the Enviroshake in half on the nail bar line, and use the thin end (the tail) as the starter row (with the clean cut edge facing

down towards the drip edge), and then use the butt end of the shake for the finishing row at the top under the ridge cap. It is important for the first course of shingles to be straight. To align, the shake needs to be even with the drip edge and nail down. The second course should be installed directly over the starter course, but should project a maximum 1/2" beyond the starter course (drip edge).

To insure that your courses remain straight, **snap a chalk line every course** and space shakes at a minimum of 3/8" apart.

The joint between 2 shakes in one course should never be closer than 1½" to a joint below or above it. This also applies to shakes with simulated joints (Example: as found in our 5-7 split- shake profile, for example).

Valley

Use 24" wide W-flashing (heavy gauge) in the valleys. Copper is recommended for added longevity, however galvanized or painted aluminum is acceptable. Apply Enviroshield (if not using Enviroshield use an ice and water barrier material (36")) in the valley and along the rakes prior to installing the flashing. When nailing shakes along valleys, be sure to nail no further than 2" into valley. To keep shakes along the valleys straight, use a 1" x 4" board as a guide. Place the board in the valley, one side flush against the center. Lay the last shake of the course at the valley over the 1 x 4, mark a line across the shake where it passes the board and cut. This will provide an ample space for runoff on both sides of the valley. Select un-snapped 12" shakes for this.

NOTE: Enviroshake requires that all installers review the Installation Guide Manual prior to commencing installation. FAILURE TO DO SO MAY VOID WARRANTY IF THE INSTALLATION GUIDE INSTRUCTIONS ARE NOT FOLLOWED. All installers still need to watch for colour variation with the bundles/skids at the site and further shuffle the material accordingly if this is the case.

INSTALLING MULTI-TONE ENVIROSHAKE

To create the Multi-Tone look, 50% AC- Aged Cedar Enviroshake is used, and 50% SC- Silvered Cedar Enviroshake is used. The skids will arrive on site with the SC Enviroshake being in a white wrap, and AC Enviroshake being in a green wrap. The bundles will be marked with SC having white straps, and AC having yellow straps. The CCMC sticker on the back of every bundle will also state whether the bundle is the AC or SC SKU. All bundles need to be shuffled on site, and every shake needs to be broken along the preformed keyway. Once the pieces are broken they are to be installed in an alternating pattern of 1 AC shake, followed by 1 SC shake as you move down the course. IE. 1 SC, 1 AC; 1 SC, 1 AC; 1 SC, 1 AC etc. Additionally, each subsequent row should start with the opposite colour.

IE.

SC, AC, SC, AC, SC, AC

AC, SC, AC, SC, AC, SC

SC, AC, SC, AC, SC, AC

All split shakes required 2 nails per piece. **The required gapping of minimum 3/8" between every shake must be maintained.** Enviroshake recommends using AC-Aged Cedar Enviroshake ridge caps with a Multi-Tone Enviroshake roof.

Enviroshake Staggered Coursing:

This installation details below are based on a 7.5" reveal / 12.5 bundles per square.

Step 1: For this installation process, the Enviroshake shakes need to each first be split. This can be done by holding the shake with two hands, one on the left and right side of the shake in the middle, and applying pressure to the keyway on the shake using a quick snapping action over ones knee or similar object.

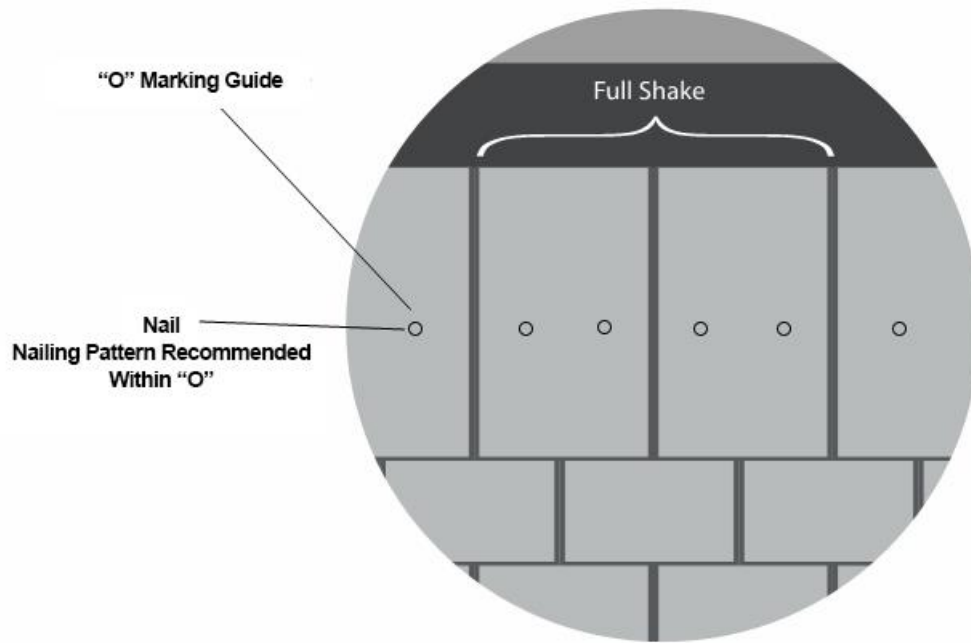
Step 2: See above for starter row instructions. Lay the first course of shakes flush on top of the starter. Then snap a horizontal line at a 7.5" reveal.

Step 3: The first shake on the second course should be installed putting the tip of the shake on the chalk line. The next or adjacent shake should be 1" below the line. The third shake should be on the line; the fourth shake should be below the line. This continues in the same pattern all the way across the roof one shingle tip on the line and the next 1" below the line.

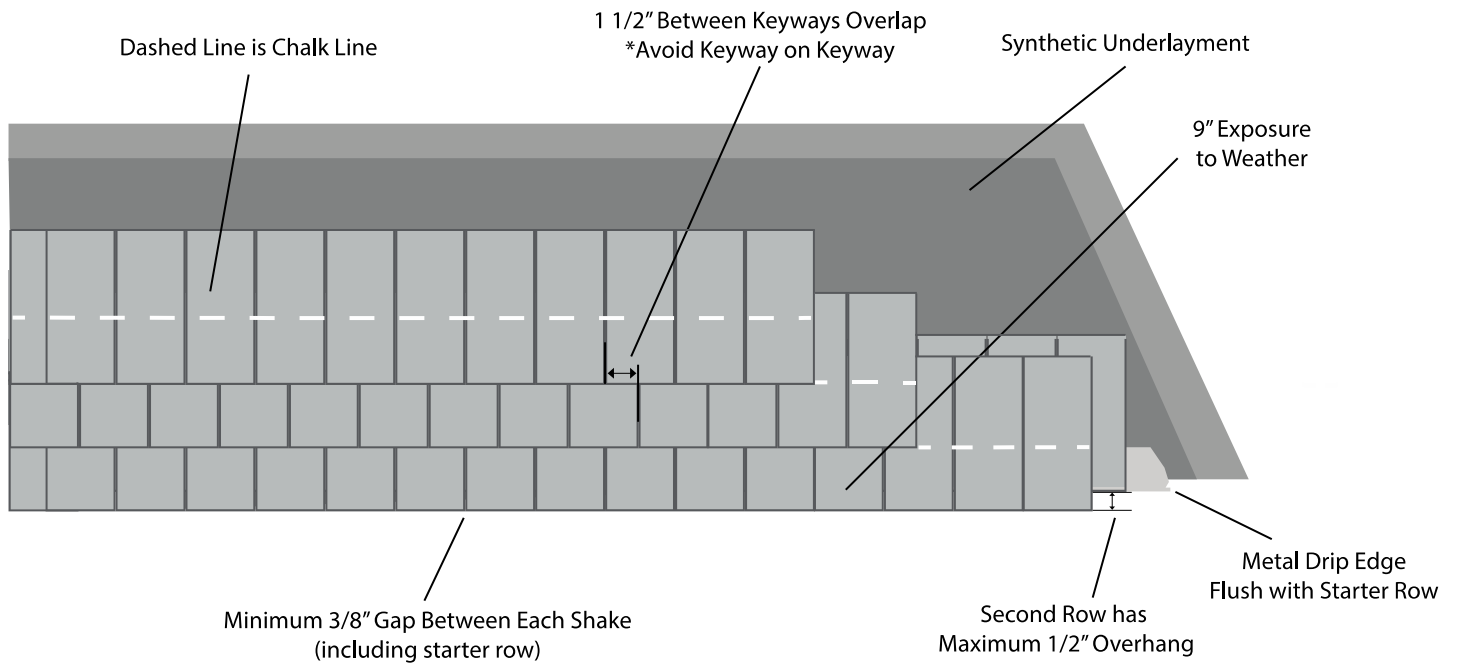
Step 4: Snap another horizontal line 7.5" above the line you chalked in Step 2. Start laying shakes as in Step 2 with the first shake tip on the line and the next shake tip 1" below the line.

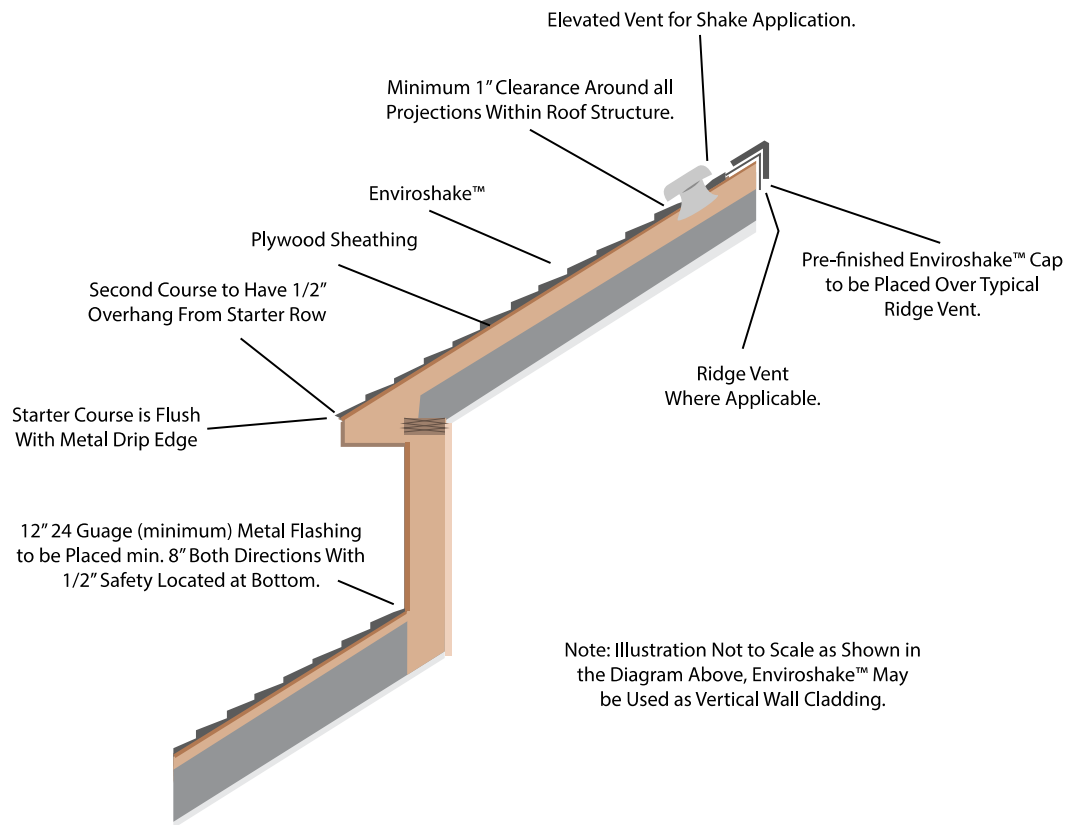
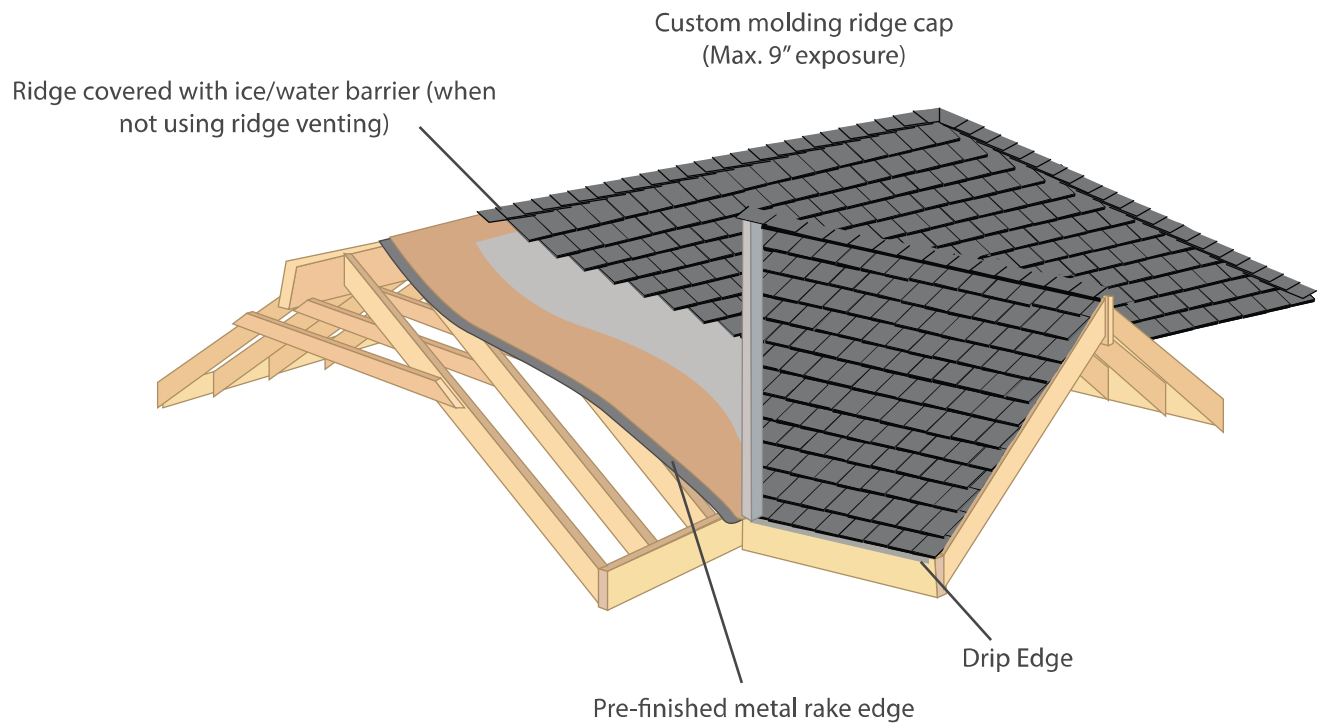
Step 5: Continue up the roof in this manner.

Do not use red chalk lines on Enviroshake as the chalk may permanently discolour the shake.



Illustrated as 6x6 Split Enviroshake
Use 4 Nails Per Shake





Note: Illustration Not to Scale as Shown in the Diagram Above, Enviroshake™ May be Used as Vertical Wall Cladding.

SPEC SHEET – Enviroshake®
A Composite Cellulosic Fibre and Polymer
Engineered roofing Material

Colour: **Silvered Cedar, Aged Cedar, Multi-Tone. Within six to twelve months (with exposure to UV) the product will “weather” similar to a cedar roof. Variation in weathering is expected as with a natural cedar shake roof.**

Contour: The exposed surface is striated, maximum 9” exposure, up from the butt end to the nailing strip (nailing points indicated by circles “O”) and is flat and smooth to the tapered end. The underside of the shake is flat with hollow recesses.

Dimensions: **Enviroshake®** comes in widths of 12”, 4”- 8”, 8”- 4”, 7”- 5”, 5”- 7”, and 6”- 6” with a length of 20”. Each bundle is comprised of 13 shakes that have the appearance of random widths that can be further separated by breaking them along the simulated key-way. Each shake is tapered and measures approximately ½” at the butt end and narrows to approximately 1/8” (resembling a taper-split cedar product). The silvered cedar shakes are bundled with white strapping, the aged cedar shakes are bundled with yellow strapping bearing the **Enviroshake®** script, labeled and shrink-wrapped (Silvered Cedar in white wrapping, Aged Cedar in green Wrapping) on skids (7 square/skid) for shipping. Each bundle contains 13 pieces of varied widths. There are 10 bundles to a “square” at a 9” exposure. Ridge/Hip caps are a 12” wide one-piece shake, custom formed to slopes of 2/12 through 16/12 and installed at the recommended maximum 9” exposure.

Coverage: 10 bundles (1 square) covers 100 square feet for the manufacturer recommended 2/12 slope (or greater) at the maximum 9” exposure. This maximum exposure applies to Enviroshake shakes not less than 20” long. To determine the number of ridge or hip caps required for a particular pitch, divide the total linear feet by .75 (i.e. 15 feet of ridge/hip divided by .75 equals 20 caps). Ridge caps come in bundles of 10 pieces.

Installation: The installation of the **Enviroshake®** is basically the same as applies to installing wood shingles and hand-split shakes. Normal code requirements must be applied regarding material standards, fastening, and flashing at intersections when installing the **Enviroshake®** as the roof covering in a roof covering system. Regular 1 ½ ” (min) large head roofing nails are required. They can be hot dipped galvanized roofing nails or stainless steel roofing nails. **Enviroshake** recommends stainless steel nails. A power-nailer is suitable for use in installation.

Weight: Enviroshake® weighs approximately 260 lbs per Square. (100 square feet of coverage at max. 9” exposure)

Storage: Do not stack more than 2 skids high. Caps **cannot** be double stacked.

National Research Council Canada
Institute for Research in Construction

CCMC Evaluation Report

Division 07318.1
Issued 2003-03-20

Registration # CCMC 13105-R

Testing of the "Enviroshake®" roofing shake roofing shake s was conducted at independent laboratories recognized by CCMC.

Subject to the limitations and conditions stated in the report, test results and assessments provided by the proponent show that "Enviroshake®" complies with CCMC's Technical Guide for Recycled Plastic Composite Shakes, Masterformat number 07318.1, dated 2002-11-21, and provides a level of performance equivalent to that required in:

- NBC 1995, Subsection 9.26.2

Canada Mortgage and Housing Corporation permits the use of this product in construction financed or insured under the National Housing Act.

**Province of Ontario– Ministry of Municipal Affairs and Housing
Building Material Evaluation Commission (BMEC) Authorized**

BMEC Authorization # 99-12-240

Date of Authorization December 14th 1999

"The **Enviroshake®** roofing shingles are manufactured in accordance with the limitations and conditions of this authorization and will provide the level of performance equivalent to that which would be achieved by conformance with Article 9.26.2.1 of the Ontario Building Code."

Enviroshake® Slope Chart

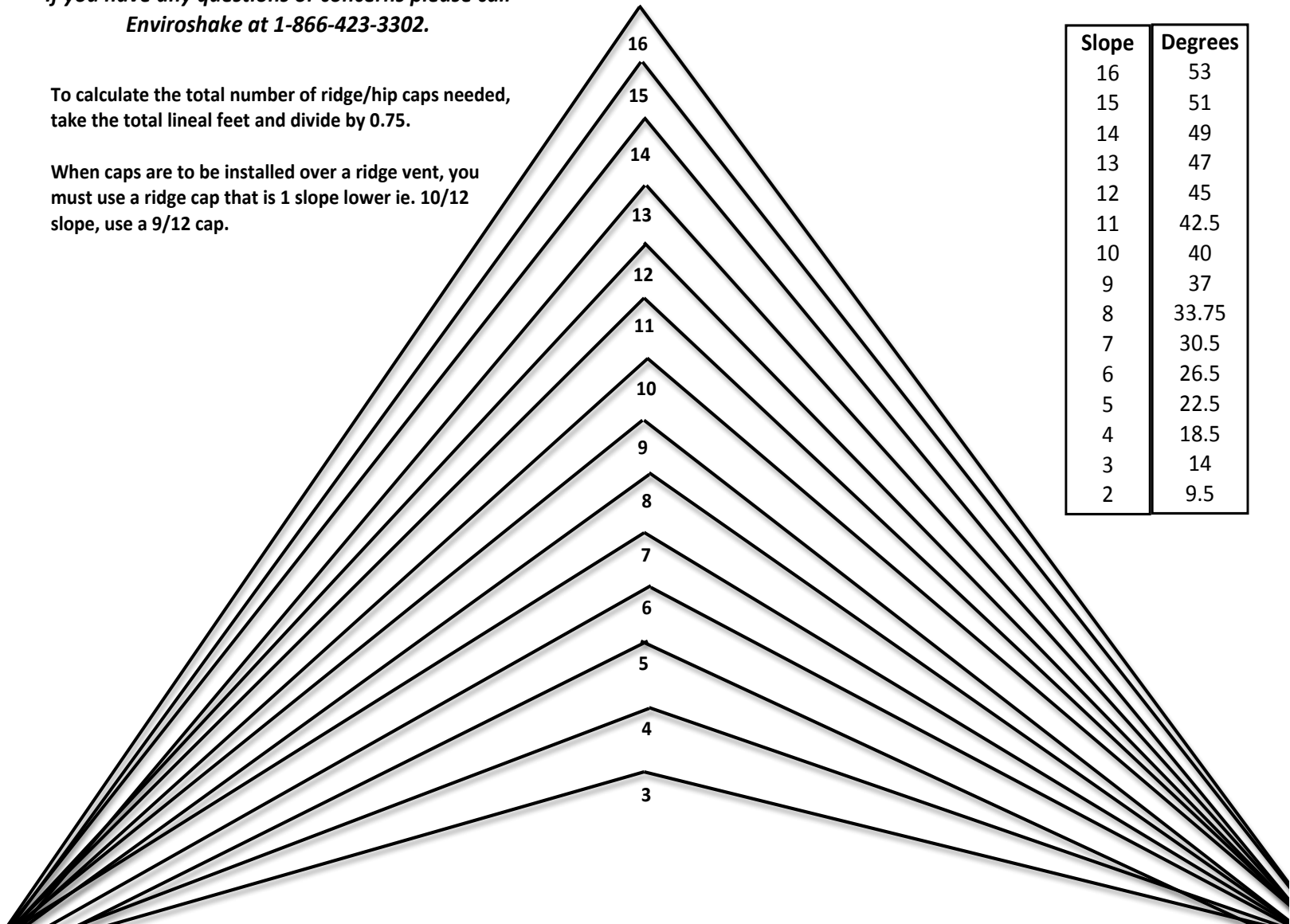
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If you have any questions or concerns please call
Enviroshake at 1-866-423-3302.

To calculate the total number of ridge/hip caps needed,
take the total lineal feet and divide by 0.75.

When caps are to be installed over a ridge vent, you
must use a ridge cap that is 1 slope lower ie. 10/12
slope, use a 9/12 cap.

| Slope | Degrees |
|-------|---------|
| 16 | 53 |
| 15 | 51 |
| 14 | 49 |
| 13 | 47 |
| 12 | 45 |
| 11 | 42.5 |
| 10 | 40 |
| 9 | 37 |
| 8 | 33.75 |
| 7 | 30.5 |
| 6 | 26.5 |
| 5 | 22.5 |
| 4 | 18.5 |
| 3 | 14 |
| 2 | 9.5 |



Enviroshake® Hip Conversion Chart

| | | Slope #1 (with degrees) | | | | | | | | | | | | | | | |
|-------------------------|---|-------------------------|---------|---------|---------|----------|-------|-------|---------|-------|-------|-------|-------|-------|--|--|--|
| Slope #2 (with degrees) | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | | |
| | | (18.5°) | (22.5°) | (26.5°) | (30.5°) | (33.75°) | (37°) | (40°) | (42.5°) | (45°) | (47°) | (49°) | (51°) | (53°) | | | |
| 4 (18.5°) | 3 | | | | | | | | | | | | | | | | |
| 5 (22.5°) | 3 | 4 | | | | | | | | | | | | | | | |
| 6 (26.5°) | 4 | 4 | 4 | | | | | | | | | | | | | | |
| 7 (30.5°) | 4 | 4 | 4 | 4 | 5 | | | | | | | | | | | | |
| 8 (33.75°) | 4 | 4 | 4 | 5 | 5 | 5 | | | | | | | | | | | |
| 9 (37°) | 4 | 5 | 5 | 5 | 5 | 5 | 6 | | | | | | | | | | |
| 10 (40°) | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | | | | | | | | | |
| 11 (42.5°) | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | | | | | | | | |
| 12 (45°) | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | | | | | | | |
| 13 (47°) | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | | | | | | |
| 14 (49°) | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | | | | | |
| 15 (51°) | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | | | | |
| 16 (53°) | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | | | |

NOTES:

Use this chart for finding the ridgecap to use on a hip where two sloped roof sections meet:

1. Find the column and row based on the slope of the two roof sections that
 2. The number in that box is the corresponding ridgecap to use along that
- To calculate the number of Enviroshake ridgecaps needed along the hip, you will need to find the true length of the hip and divide that figure by 0.75. This calculation is based on a 9" exposure.

This is valid for eave corner angles of 90 degrees only.

The slope are shown as the rise over a run of 12. (ie. 4:12 is shown as 4)

* All degrees are listed beside the corresponding slope