



Lamboo® LambooFusion™ Rainscreen™ w/Titan™ Clip Fastening System

Horizontal Siding Installation Guidelines using Titan™ Rain Screen Clip over Plywood or OSB

Before starting your Lamboo Rainscreen installation, check that these important items have been done properly:

Pre-Check 1 – Make sure your structural sheathing has been attached properly to the framed wall system per manufacturer’s instructions and local building codes. Plywood or Oriented Strand Board (OSB) may be used. The panel thickness should be rated for structural application and must be a minimum of 5/8” thick. Plywood is typically stiffer and stronger than OSB. Thicker plywood or OSB makes a stronger wall and has greater holding strength for the screw.

Note Foam and gypsum boards are not structural panels. (Installation of the Lamboo Rainscreen System over non-structural panels is possible – refer to Lamboo Attachment Channels and alternate installation techniques)*

Pre-Check 2 – Make sure the drainage plane material has been properly installed. Use the appropriate AWB (Air and Water Barrier) or WRB (Weather Resistant Barriers) as specified by the architect or designer. There are many products available to address requirements of the exterior wall in your climate zone.

Pre-Check 3 – All windows and exterior doors should now be installed properly. Check to ensure that the installation (and flashing) instructions from the door and window manufacturers were properly followed. *Note* Window and door manufacturer’s installation instructions always take precedent over these guidelines.*

Lamboo® Titan™ Clip Horizontal Rain Screen Siding Installation Guidelines Titan™ Rain Screen Clip over Plywood or OSB

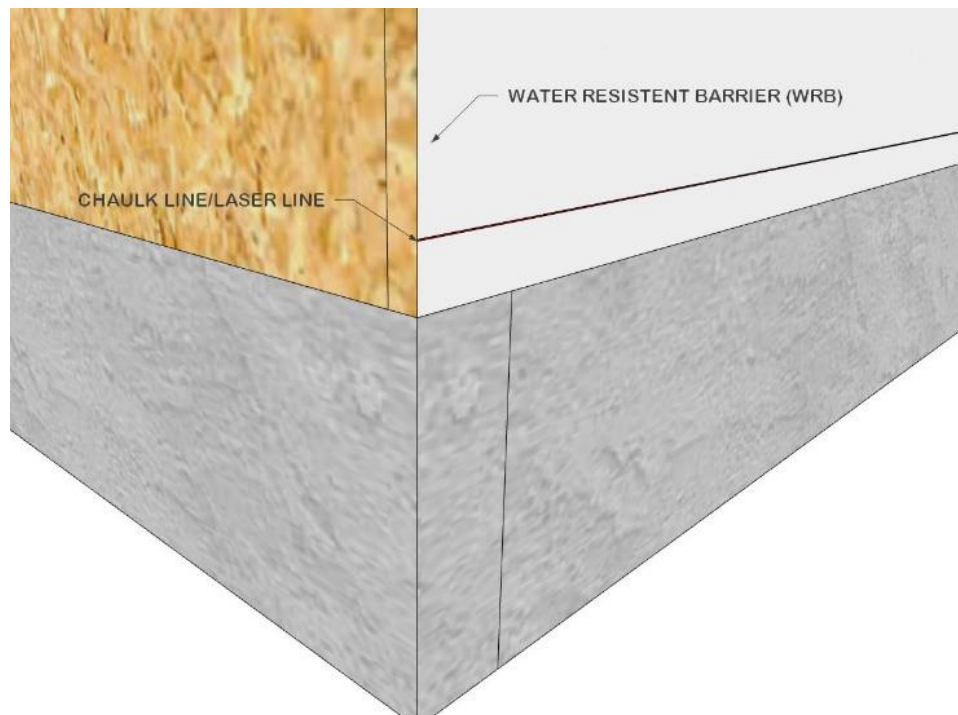
Step 1 – Proper acclimation is imperative. Before starting any exterior installation, *always* make sure your material has properly acclimated to local site conditions. Failure to properly acclimation onsite could result in poor or undesired results. Typical acclimation time for Lamboo products is at least 48 to 72 hours prior to installation.

Step 2 – Tools Required. LambooFusion™ Rainscreen products can be installed with common building tools used in the building industry. All tools should be used according to the applicable manufacturers’ instructions. The following are basic tools required for installation:

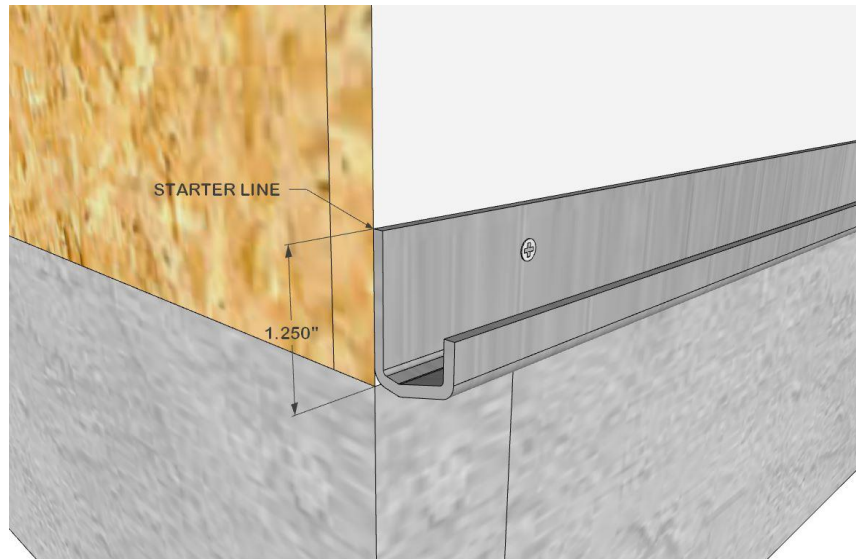
- Number of Person – At Least 3 is recommended
- Cordless Drill (18v or greater recommended)
- Chalk Line
- Carpenter’s Level or Laser Level
- Carpenter Square
- Tape Measure
- Miter Saw
- Jig Saw
- Hand Router
- All Proper Protective Equipment (PPE) (i.e., safety glasses, gloves, etc...)

Step 3 – Create a level line for the starter rail on all walls. This can be done with laser lines, or a snapped chalk line. We recommend that you complete this step on all walls, to ensure the starter rail level line will be consistent on all sides of the building. This step is critical to a successful siding installation and should be done with accuracy. The level line should be positioned approximately 1-1/4" above the bottom of the sheathing or 1-1/4" above the top of the foundation sill.

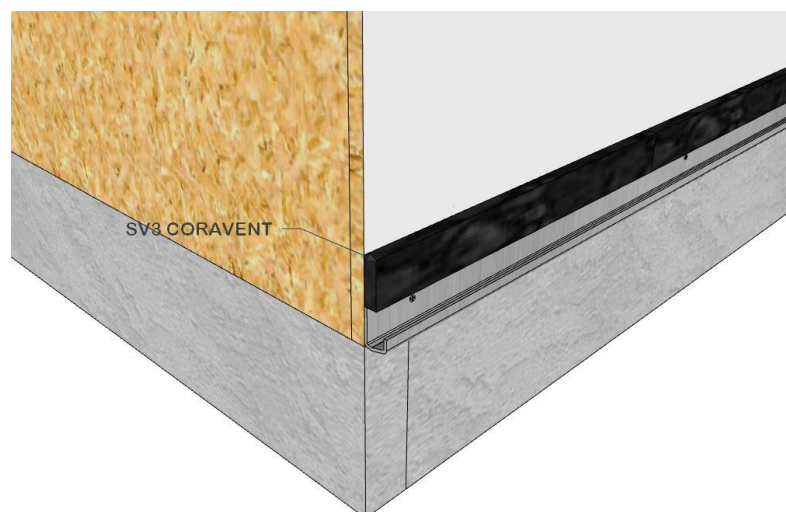
****Take the time to do this step well, and all your next rows of siding will be properly aligned as you build.***



Step 4 – Installing the Starter Rail. To speed up your installation and help provide *the critical level line* to start your horizontal siding installation, use the Lamboo 8' Starter Rail. The Starter Rail provides a continuous strip at your bottom course of siding. The marine-grade aluminum starter rail has pre-drilled holes for mounting to the plywood walls and weep holes on the bottom of the rail to allow water drainage.

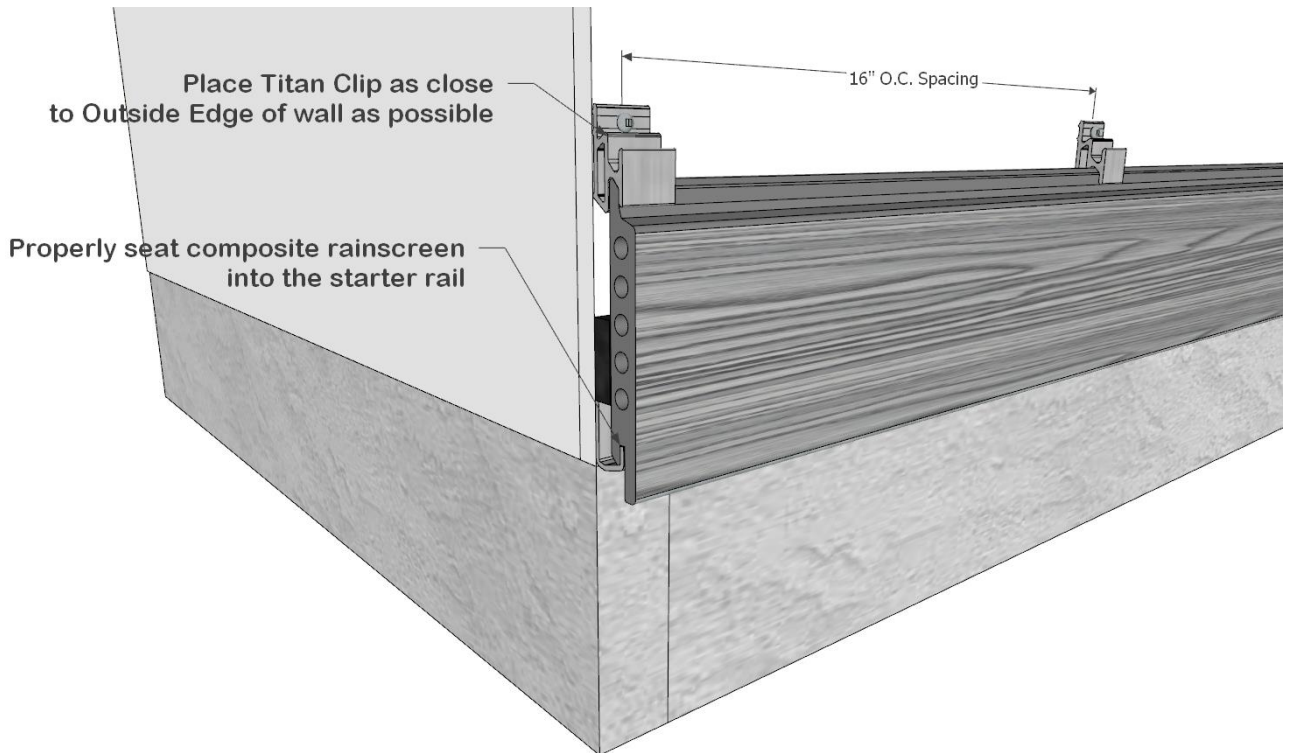


Step 5 – Install Siding Vent. We recommend installing a siding vent system to prevent insects from entering the wall cavity from the ground and allow for proper drainage of water that may penetrate behind the rainscreen system. The Cor-A-Vent SV3 siding vent system is 7/16" thick and fills the rain screen wall cavity between the drainage plane created by the Lamboo Titan™ rain screen clips. **Note It is also suggested to install the siding vent at the soffit, above door openings, and above/below window openings.*



When using the 5" rain screen siding, align the Cor-A-Vent siding ventilation across the top of the starter rail and fasten them to the sheathing. Roofing nails or Air nailed staples work well. The assembly will be covered by the siding board in the next step.

Step 6 – Insert Bottom Start Piece of Lamboo Rain Screen Siding board into the Starter Rail. Place the bottom groove of the Lamboo Rainscreen material into the starter rail lip. Occasionally you may need to use a rubber mallet to seat the board properly into the clip. Seating each board properly gives the best alignment for your wall.

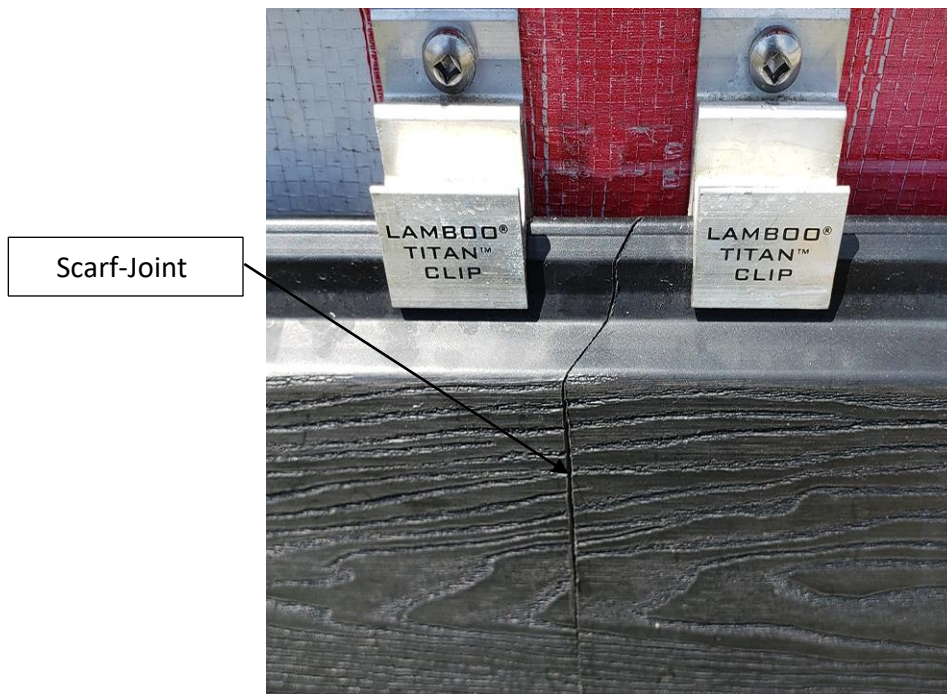


Important Note If your board does not seat properly, don't install it. NEVER "force" a board into place. You may cut out any bow or bend (defect cutting) and install only the usable portion of the siding board.*

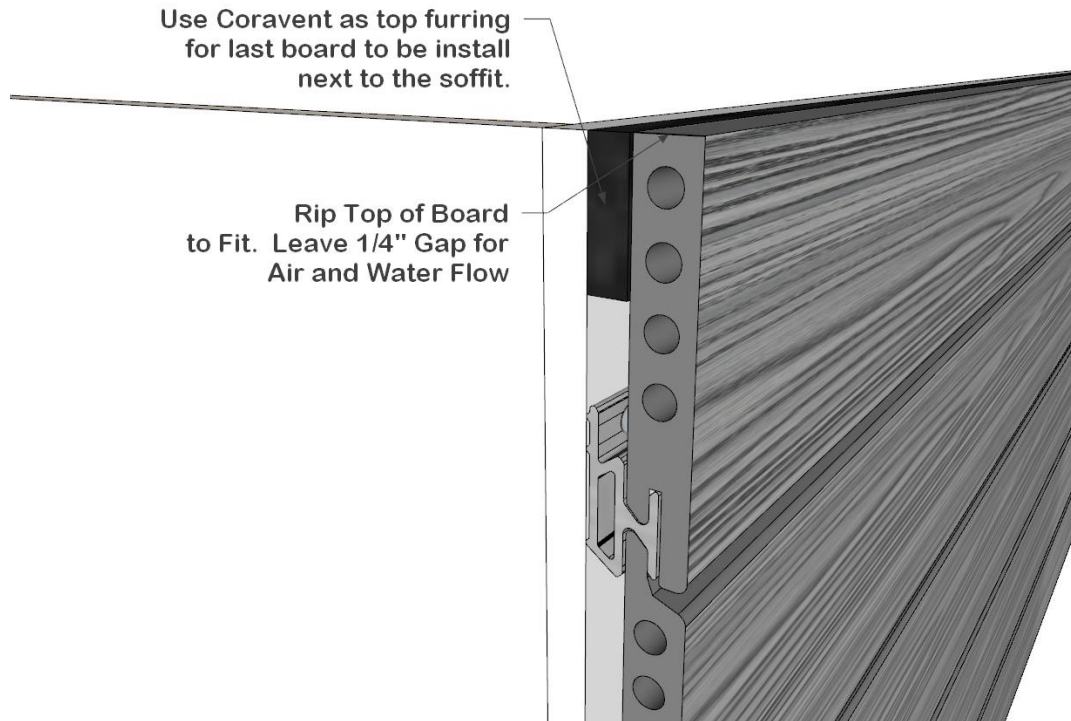
Now begin attaching the rain screen clips to the top of the siding board. Space the rain screen clips at 16" on center using 1 screw per clip. For shorter runs, don't short yourself on the clips, add an extra clip anywhere needed. The more clips you use, the better the board will perform over time.

Step 7 – Repeat the clip installation process for each row of siding. A major benefit of this system is that you can use full length siding boards. Wherever you need to make a joint in the length of siding, simply use a rainscreen clip on each side of the joint. You will automatically get proper alignment of the two boards. Always use two clips to secure the ends of siding boards.

When butting two siding boards together it is a best practice to use the “scarf joint” technique. A 45-degree angle at each end of cut boards work best. Master craftsmen prefer this method for best results and a quality installation you will be proud of for years. (If you use standard butt joints with 90-degree cuts, over time, the joints will open due to expansion and contraction of the composite materials.)



Step 8 - Installing the top row of siding. When you reach the soffit (or areas below window openings), it is typically necessary to rip the top of the siding to the appropriate width.



Note If you trim the width 1/4" narrower than required, it will be easier to install the siding and allows for better ventilation at the top of the rain screen wall cavity.*

The bottom edge of the top row of siding will seat in the rain screen clip. The top edge of the siding will need to be pre-drilled and face fastened to blocking behind the siding. We suggest using the Coravent siding vent system or short pieces of solid wood blocking behind where you will be screwing and placing siding vent between the blocking to allow continuous uninterrupted ventilation at the top of your rain screen wall system.

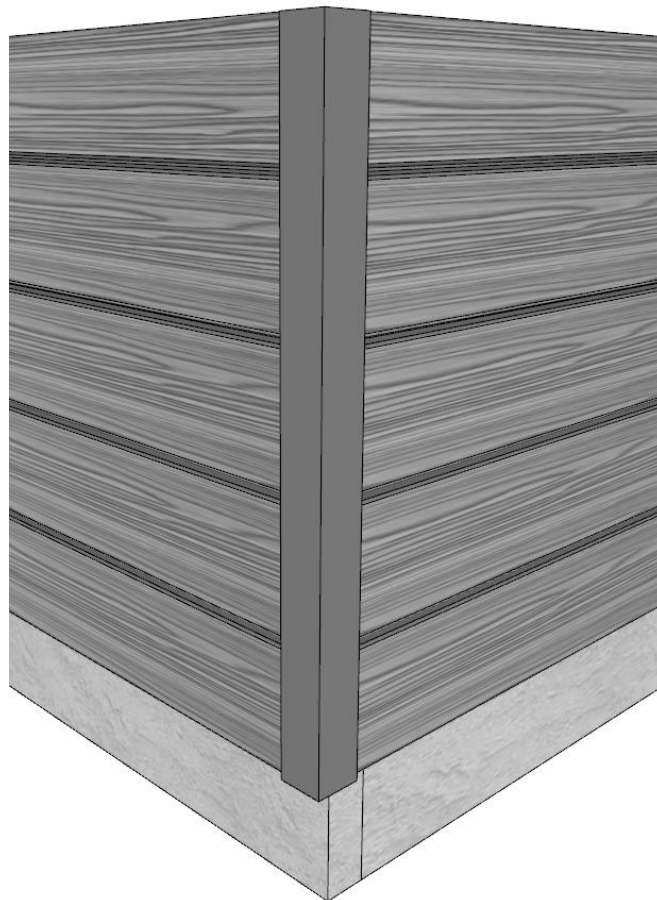
Step 9: Installing Outside Trim Pieces. The LambooFusion™ Composite Rainscreen System does come with optional Outside Corner Pieces that can be used to cover the outside corners where the two walls meet and also as window/door trim. The Outside Corner pieces come in 50mm x 50mm and 62mm x 55mm size facings.

The Outside Corner pieces can be installed with either an air brad nail gun or trim screws. It is strongly recommended that exterior grade construction adhesive be used with both methods. This helps provide added fastening strength to the Outside Corners.

Apply the construction adhesive to the inside portion of the Outside Corner and press firmly against the rainscreen materials. Position the Outside Trim piece to seat flush into the corner. Be care not to place too much of the construction adhesive near the outside edges where the adhesive begins to squeeze outside of the corners and onto the exposed rainscreen materials.

Once the Outside Corner is in place, secure with either a brad nail or trim screw.

- If using brad nails, please every 10" to 12".
- If using trim screws, please every 16" to 24".





Do's and Don'ts: The following information provides additional “Do's” and “Don'ts” when installing and using the LambooFusion™ Rainscreen products:

- Static electricity may occur naturally.
- Color and grain patterns are utilized to mimic real wood and will promote variations in finished color due to the various angles and impression depths left by embossing the materials. These variations are not considered defects.
- LambooFusion™ Rainscreen products are not meant to be mounted directly to concrete. A sleeper (furring strip) should be used with a minimum height of 1/2". The sleeper should be mounted to the concrete with the appropriate fasteners. Reference local building codes for proper fasteners and attachment methods.
- Only install composite materials on days when temperatures are not below 40° and above 90° Fahrenheit.
- Do not expose composite materials to long durations of direct sunlight prior to installation as sunlight will cause the materials to heat up and expand.

- **Excessive Heat Warning**
 - The LambooFusion™ Rainscreen product may generate high surface temperatures during certain parts of the day when directly exposed to sunlight, fire, or reflection of sunlight onto the rainscreen surface.
 - The LambooFusion™ Rainscreen should also not be installed where low-emissivity (Low-E) glass is used. Low-E glass is designed to prevent heat gain within a structure and can cause unusual heat build-up on exterior surfaces. Excessive heat build-up greater than normal exposure limits could potentially cause several issues not covered by warranty, including but not limited to sagging, bowing, warping, discoloration, excessive expansion/contraction, and accelerated weathering.

- **Construction Debris**
 - Keep rainscreen surfaces clear of unnecessary clutter and build-up of waste and drop materials. Unused or scrap rainscreen boards if not handled correctly could damage installed rainscreen surfaces.
 - **IMPORTANT:** Do not allow dust from concrete, landscape blocks, rock, or other masonry products to accumulate on the rainscreen surface. If any dust should occur, it should be cleaned immediately. Failure to do so may cause surface staining that is not covered by warranty.

EXPANSION AND CONTRACTION:

The LambooFusion™ Rainscreen products will have some expansion and contraction due to changes in temperature. The expansion and contraction encountered may result in slight gaps, which may be noticed at the ends of boards or in splice joints. Fastening the rainscreen according to the Installation Guidelines will help minimize issues due to expansion and contraction.

It is important to keep rainscreen products stored in cool areas prior to installation. Rainscreen exposure to direct sunlight prior to installation will cause the materials to build-up heat and expand causing the boards to lengthen.



Storage & Handling:

- Store LambooFusion™ Rainscreen products on flat level surfaces.
- Store rainscreen materials in a cool, shady area prior to installation. Storing materials in direct sunlight prior to installation could cause materials to build-up heat and expand.
- Do not stack bundles over 4 units high.
- Always leave factory applied protective wrap. If materials are to be stored outside, cover with a non-translucent material.
- Use care when handling materials with forklifts, lulls, skid steers, and other material handling equipment.
- Avoid storing materials in enclosed spaces that may exceed 120°F.
- Allow materials to acclimate to the jobsite location for 48 to 72 hours prior to installation.

Warranty:

Lamboo offers limited consumer and commercial warranties on its LambooFusion™ Rainscreen products. For residential applications, there is a fifteen (15) year limited warranty and for commercial applications, there is a ten (10) year limited warranty. For more detailed information in regards to the LambooFusion™ Warranty, please reference the LambooFusion™ warranty found on our website at www.lamboo.us/warranties.

Care & Maintenance:

- Be sure to clean any chemicals such as lawn care chemicals, insect repellent, or other chemicals that may come into contact with the rainscreen materials immediately to avoid any chemical reactions or discoloration.
- Use typical cleaners found in the market for composite materials. Rainscreen materials can be easily cleaned with the use of a power washer set to the lowest setting (3,000 psi) and the user must start at least 24 inches away from the surface and work their way in towards the material until materials show signs of cleaning and no scarring occurs.

NOTE: It is recommended to test cleaners and power washing strength on scrap materials prior to using on finished products.

For any questions that have not been addressed in the guidelines as stated above, please contact one Lamboo's product specialists through email at sales@lamboo.us or via phone at 866-966-2999.