



GARRISON

## Aqua-Shield Waterproof Laminate Installation Guide

The intended end user and the installer should have a clear understanding of expectations of the color, installation, and layout. Carefully inspect the products before installation for any milling, dimensional, or visual defects. If the flooring supplied does not satisfy the customer, do not proceed to install. The decision not to proceed must be made within the first 10% or 100 sqft of the flooring boxes opened. Open boxes exceeding this amount will not be eligible for return.

### TO AVOID COSTLY INSTALLATION MISTAKES ONLY INSTALL FLOORING IN ROOMS UNDER ADEQUATE LIGHTING CONDITIONS

#### GENERAL JOBSITE/HOME CONDITION

Important: The requirements listed below are considered standard practices for the flooring industry and are required by most building codes. Following these simple guidelines will greatly extend the life of any fixture in the jobsite/home. Local building codes may vary and will prevail.

- It is the jobsite/homeowner designated installer's responsibility to inspect flooring prior to installation. Inspect every plank for inconsistency with the finish, texture, milling, color, graining, tongue and groove integrity, dimensions, and the suitability of the flooring product to its environment. Flooring products installed with pre-existing defects or were incorrectly acclimated CANNOT be claimed after installation.
- Verify there are enough materials to complete the job with a minimum of 2% extra for future plank replacements.
- Allow a minimum of 5% waste for culling, shipping damage, and for on-the-job waste.
- Make sure the crawl space has at least 18" clearance from the dirt to the bottom of the beams. Remove all cardboard from the concrete walls, pillars, and footings as it will trap and hold moisture. The entire crawl space must be covered with a minimum of 6 MIL plastic (puncture resistant) with all seams overlapped 18" and fully sealed with a moisture proof tape.
- To prevent excessive moisture buildup, all crawl spaces must have a minimum of 1.5 square feet for every 100 square feet of crawl space at the exterior of the house for cross ventilation or an air exchanger will be needed. It may be necessary to install temperature/humidity activated exhaust fans to create air movement in the crawl space.
- Drainage from roofs, rain gutters, and other sources of moisture around the jobsite/home must be directed away from the site.
- All exterior doors, windows, drywall, painting, and venting must be properly installed prior to the delivery of the flooring to the jobsite/home. Do not store in exterior sheds, garages, or rooms that are not temperature controlled.
- All heating and cooling systems are required to be installed and functioning for at least 14 days before the installation of the flooring begins.
- Use a hygrometer that reads temperature and RH (relative humidity) to check jobsite/home heating and cooling systems. They must be able to maintain a minimum of 30 to 60% RH and 60 to 80°F before and during the flooring installation. Post installation, the temperature must be maintained between 60-142°F.
- Small humidifiers are not capable of properly maintaining the humidity levels in large jobsites/homes. Your local heating and cooling air service contractors can provide information for automatic humidifiers/dehumidifiers that work with your heating and cooling systems.
- Laminate flooring is not recommended to be installed any area of the jobsite/home that has extreme temperature and moisture fluctuations. For example: saunas, hot tub/pool rooms, green houses, exterior porches, or garages.
- Since flooring is not compatible with wet conditions, the manufacturer does not warrant against moisture related issues or related damage under their warranty.

#### GENERAL INSTALLATION SPECS

- Aqua-Shield laminate flooring produced with patented Unilin Uniclic System.
- Avoid installing flooring planks pieces less than 8" in total length against walls or on ends.
- Must use 3 in 1 underlayment pad with moisture barrier.**
- It will generally be necessary to saw some flooring panels during installation. To obtain a clean cut, the pattern side should face down if using a jigsaw, saber saw, or circular handsaw and face up when you use a handsaw, table saw, or a crosscut saw.
- Before installation begins, use a jamb saw to undercut all door casings (1/16" between door casing and top of flooring material) and vertical objects coming off the floor. To achieve the correct height, combine a piece of the vapor retardant and flooring together to use as a guide for the saw. Be sure to clean out all debris from under the jambs. This will allow the flooring to slide underneath the object for a clean, professional look.
- Contractors: When setting door casings post-installation of the flooring material, make sure there is adequate space for the flooring material to expand and contract without any hindrance.
- Never fasten nails/screws anything through the flooring into the substrate. The floor MUST be allowed to float freely.
- For a perfect finish around pipes, use rosettes or caulking in places where profiles or skirting cannot be placed. Fill expansion gaps with matching caulking. Silicone caulking has more elasticity than other caulking material (e.g. acrylic or blends).

#### GENERAL SUBSTRATE CONDITIONS

- All substrates must be flat and free of dust, loose particles, paint, drywall compound, and structurally sound.
- Sand and/or flatten the substrate to within 3/16" dip or rise in 10' or 1/8" dip or rise in 6' radius for.
- If leveling of the substrate is required, use only cement-based leveling compounds. Be sure to follow the leveling compounds manufacturer installation guidelines.
- Laminate flooring can be installed over wood sub-floors that are ON or ABOVE GRADE and over concrete or gypcrete substrates that are BELOW, ON, or ABOVE GRADE.
- The substrate when walked on must not exceed 1/4" deflection in a 6' radius, or more then a 1/16" between the floor joist. If it does, this condition must be corrected before any product installation begins. The subfloor will not stiffen up after the flooring is installed.
- Always check and repair any loose, delaminating, or broken substrates.
- Hand-held angle grinders with special cupped diamond grinding wheels and vacuum attachments can be rented or purchased from your local rental or home building center. This system works well with any type of substrate. Use precautions when sanding any surface. Check the substrate out for any health hazards. Always wear safety equipment and approved dust mask.

#### APPROVED SUBSTRATES

##### PLYWOOD/OSB:

- Do not install over wood subfloors that test above 12% MC (moisture content).
- Note:** If installing new wood subfloors from lumber yards, be sure to test the MC. Typically, they have higher levels of moisture and may need to acclimate longer. This condition is not covered by any manufacturer warranty.
- Fix all squeaks coming from the wood subfloor prior to installation. Use wood screws, minimum of 2-1/2" lengths, fastened every 6" through the wood subfloor into the joist. Squeaks in the subfloor will not go away after the floor has been installed.
  - When joists are 16" o/c or less; minimum acceptable thickness is 5/8" CDX plywood or nominal 3/4", OSB 40LB Minimum density, T&G, with a TECO or APA certification stamp.
  - When joists are 16" o/c up to 19.2" o/c; minimum acceptable thickness is 3/4" plywood or nominal 3/4", OSB 40LB Minimum density, T&G, with a TECO or APA certification stamp.
  - When joists are 19.2" o/c up to 24" o/c; minimum acceptable thickness is 7/8" plywood or nominal 1", OSB 40LB Minimum density, T&G, with a TECO or APA certification stamp.

##### CURED CONCRETE/GYPCRETE: (Must use 3 in 1 underlayment pad with moisture barrier)

- Cured concrete must be over 3000 PSI. Cured gypcrete must be over 2500 PSI.
- All concrete or gypcrete substrates must be cured for a minimum of 60 days before any flooring product is ever installed over them.
- Concrete moisture testing should be performed by ASTM F1869 Calcium Chloride Tests with levels NOT exceeding 5LBS per 1000 ft2 for a 24 hour period, or an ASTM F2170 In-Situ relative humidity test with readings exceeding 80%.
- Gypcrete dries very fast so Maxxon recommends just using the mat test or Delmhorst #B2100 moisture meter.
- Test the concrete subfloor for alkalinity. The pH of the floor should be between 5 and 9).

##### PARTICLE BOARD (UNDERLAYMENT-GRADE):

- The only manufacturer recommended installation method that can be used directly over underlayment-grade particle board is the floating method as long as there are no current or future moisture concerns from below or above. If moisture comes in contact with the particle board, it may swell. The product warranty does not cover subfloor upheavals.

##### OTHER APPROVED SUBSTRATES (FLOATING ONLY): (ALL MOISTURE CONTENT, FLATNESS AND DEFLECTION REQUIREMENTS WOULD APPLY.)

- Ceramic, porcelain, or natural tile with the grout joints filled flat with Portland based patching material. Single layer of clean, well adhered, non-cushioned, full spread glued sheet vinyl, or VCT. All embossing must be feathered filled with suitable filler patching compound.

##### UNACCEPTABLE SUBSTRATES:

- Solid or engineered wood floors over concrete or with any texture.
- Floors that are floating, cushioned, perimeter glued, carpet, carpet pad, lumber subfloor, or subfloors that are sticky.
- ACQ treated plywood or exterior low density OSB sheeting used for general construction.

#### EXPANSION REQUIREMENTS

- Leave a minimum of 5/16" expansion gap for all installations under 20' lengthwise or widthwise. For installations exceeding 20' lengthwise or widthwise, add 1/16" per additional 5' of length or width, up to 5/8". For example: 25 linear feet would require a 3/8" expansion gap.
- Transition strips/breaks are required on installation exceeding 50 feet lengthwise or widthwise. See radiant heat section for in-floor heat.
- Never install cabinetry, islands, or other permanent fixtures on top of a floated floor.
- Never use nails to secure anything to the floor. The floor must be allowed to float.
- Leave the required expansion gap around all walls, tubs/shower, plumbing fixtures, large Sub Zero style refrigerators, exterior doors, etc.
- Once the floor installation is complete, remove all spacers that were used to maintain the expansion gap.

#### HOW TO PROTECT THE FLOOR DURING & AFTER INSTALLATION (DURING CONSTRUCTION)

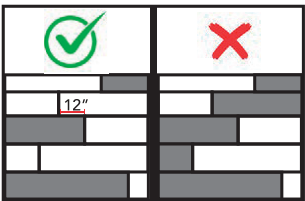
- After each section of flooring has been installed and thoroughly cleaned, cover the floor with a breathable protective construction paper (FortiBoard). Do not apply the tape directly to the surface of the flooring. It may damage the finish.
- During construction, vacuum the floor as often as it takes to keep the floor free of dirt and construction debris. Never use a beater brush.
- If drywall repairs or any type of sanding is needed, thoroughly cover the floor. These types of dust and grit can damage the floor's finish and is very difficult to remove if it gets into the joints. Do not wet mop these types of dust. Always use a vacuum without a beater brush to remove any construction dust if needed.
- Before furniture goes onto the new floor, apply approved 3/16" thick heavy-duty felt pads under all furniture feet.
- Furniture with metal or hard plastic rollers or casters are NOT APPROVED for use on laminate flooring.
- Never roll or drag anything heavy over the new floor. It will make indentations or scratches in the surface. Always use a soft-tire dolly when moving objects or a carpet piece turned upside-down or an air-sled.

Planning Your Layout

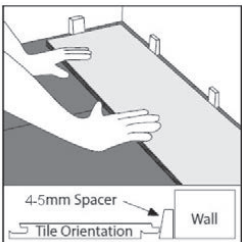
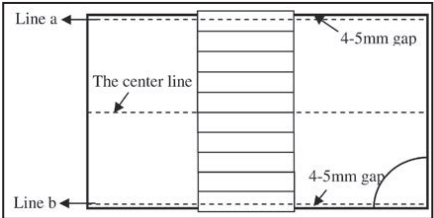
It is very important to plan your layout to avoid an unbalanced installation with narrow plank widths at the walls. Lay the long dimension of the planks parallel to the long dimensions of the room. Draw a line with a chalk lengthwise along the middle of the room. Do a dry layout of planks from the center line to the wall running parallel to the long direction of the planks to determine the width of the last row of planks see the diagram to the right.

- Reserve a 5 mm expansion gap between the line and / or line b to the walls. Avoid having less than a half plank width at the line and / or line.
- Measure the width of the room at the front, middle and back and divide the widths of each measurement by the width of a plank. If the remainder is less than half the plank width, then the planks on your starter row should be narrowed to make the last row approximately half the plank. The width of the last row of planks should be approximately the same width as the first row of planks.

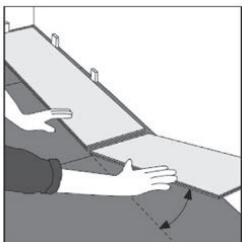
**Note:** This may also be figured out by laying down loose planks across the width of the room without securing them to each other and making the necessary adjustments.



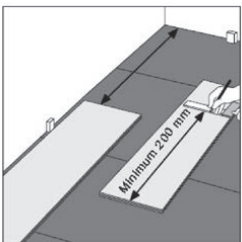
During installation, make sure that you mix the floor panels (and floor boxes) sufficiently so that there are not too many identical, lighter or darker planks next to each other. To obtain the best visual effect, it is best to install the panels in the direction of the longest wall and/or parallel to the incidence of light. Ensure that the end joints of the panels in 2 successive rows are never in line, they should be staggered by at least 12 inches. For a natural look and better mechanical strength, we do not recommend an installation of the planks in a pattern but rather at random formation.



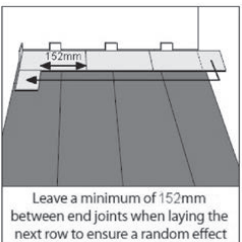
**Step 1**  
Laying first plank in corner of room with tongue side facing wall using 5mm spaces



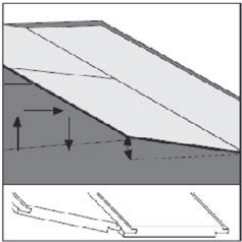
**Step 2**  
Fitting of second plank



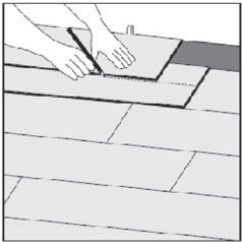
**Step 3**  
Cutting and fitting of final plank in first row



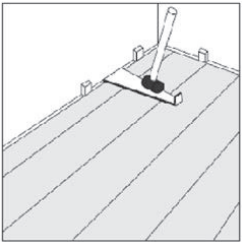
**Step 4**  
Use of offcut from previous row (optional)



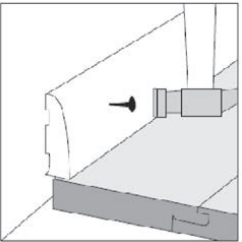
**Step 5**  
Fitting of additional planks in second row



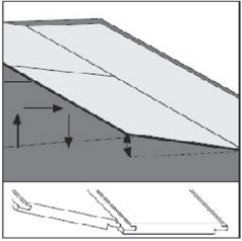
**Step 6**  
Measure and cut final row of planks allowing for 5 mm expansion gap



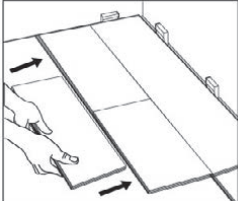
**Step 7**  
Pull bar and rubber mallet can be used for final row of planks, ensuring a 5mm expansion gap



**Step 8**  
Refitting of skirting board with hidden 5 mm expansion gap



**Step 9**  
Fixing edge trim to wall



HELPFUL HINT

When installing each new row, take a full loose plank and use the long side to tap against the prior row to ensure no gapping.



DISASSEMBLING

Separate the whole row by lifting it up delicately at an angle. To separate the planks, leave them flat on the ground and slide them apart.