

INSTALLATION GUIDELINES

Synergy[®] One and MPL: Prefinished Xcora[™] Strand Bamboo Flooring



Important Product Line Notes:

- Check Teragren.com for the latest updates to our Installation Guidelines
- Teragren Synergy Strand Bamboo Flooring is suitable for installation as a glue-down or nail-down system on or above grade. Use only adhesives certified by their manufacturer for use with Teragren Strand Bamboo. Do not use staples. Only use 18 gauge cleats.
- Acclimation: Teragren Synergy Strand Bamboo Flooring must be delivered to the job site a minimum of 48 hours prior to installation. Do not deliver or install flooring until the building has been enclosed with windows and doors, and all cement, plastering, and other “wet” work has been completed. Acclimation environment must be the same as the installation environment, 35-55% Relative Humidity at 60-85° Fahrenheit.
- Handle and unload flooring with care. Store in a dry place with at least a four-inch air space under cartons. Do not store boxes on uncovered concrete or other cementitious materials.
- Ensure flooring is installed to allow for up to 1/2” expansion or 1/2” contraction around perimeter
- Teragren Bamboo Flooring may be installed over radiant floor heating systems (see “Radiant Floors” section below). Surface Temperature of flooring must never exceed 85° F
- The use of vapor barriers (over cementitious materials) or vapor retarders (over wood subfloors) is mandatory
- Installer to document installation date, product run code (off box ends), flooring moisture content, site relative humidity, site temperature, and subfloor moisture content. This information must be retained by the installer and left with the property owner as a permanent record.

Pre-Installation Notes:

Please read Teragren LLC’s warranty, maintenance instructions, and ALL of the following guidelines before opening any packaging or beginning your flooring installation. All information within this document is provided as a courtesy to our customers and is meant to be understood as an installation guideline only. The customer and/or the installer is solely responsible for any and all decisions regarding how, where, and when to install any Teragren product.

Teragren LLC recommends using the services of a professional hardwood flooring installer. For more information and for guidelines on the installation of hardwood flooring, please contact the National Wood Flooring Association or review their website <http://www.woodfloors.org>.

Because bamboo is a natural fiber, it is not uncommon for natural variations in color to occur within and between individual flooring planks. Teragren’s warranty does not cover variations in color either in individual planks, between the planks, or the variations in color between our product samples and the installed flooring. An industry standard of 5% material overage should be added to the actual square footage required for cutting and grading allowances.

Prior to installation, all material must be inspected to ensure the material received matches the work order. Any visible defects or discrepancies must immediately be reported to your distributor or dealer. It is considered the installer/owner’s responsibility not to install flooring having finish, manufacturing, or unacceptable material variations. Individual planks with defects must not be installed or the defect must be cut-out prior to installation. Filler or putty stick may be used to correct minor flooring defects during installation. The Teragren warranty does not cover materials with visible defects once they are installed.

It is the sole responsibility of the installer/owner to determine if the job site’s sub-floor and environmental conditions are suitable for the installation of Teragren flooring and accessories. Teragren LLC makes no warranty or guarantee of the quality of the chosen installer’s work or of a particular installation performed by the installer. Teragren LLC disclaims all liability for any errors or improprieties in the installation of its products. Installation of any Teragren product serves as acceptance of that material.

INSTALLATION GUIDELINES/Synergy® One and MPL

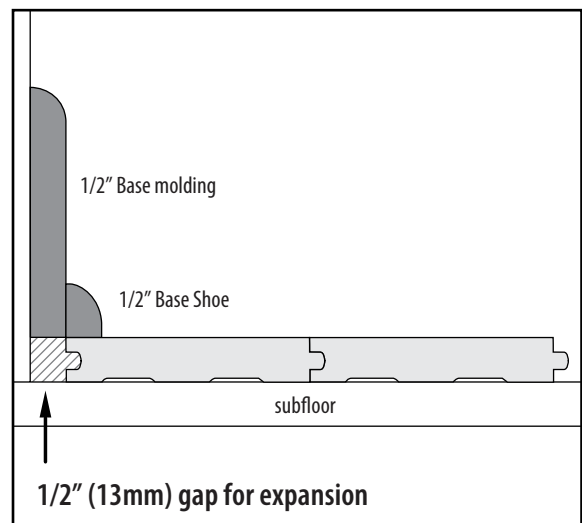
Product Acclimation:

Teragren bamboo flooring must be installed over a vapor barrier or vapor retarder into environments with HVAC systems able to consistently maintain 35-55% Relative Humidity at 60-80° Fahrenheit. Climate conditions (RH Conditions) outside of the recommended range will cause the moisture of the flooring to decrease or increase and may cause excessive shrinking, swelling, checking, cupping, buckling, or other unintended dimensional change. For proper acclimation, flooring must be delivered to the job site a minimum of 48 hours prior to installation. Evenly distribute unopened boxes in a dry space leaving at least a four-inch air space under the cartons to ensure all boxes can acclimate to job site temperature. Do not store boxes on uncovered concrete or other cementitious materials.

Installation Method(s):

Bamboo Flooring must be installed into a relative humidity controlled environment over a vapor barrier or vapor retarder per the following specifications:

- **Concrete Subfloors:** Use an appropriate liquid or trowel-applied vapor barrier membrane/adhesive system. Impermeable vapor barrier systems with a perm rating less than or equal to .13 are suggested.
- **Wood Subfloors:** Use a UU-B-790a, Grade B, Type 1, Style 1a permeable vapor retarder or equivalent with a perm rating between .7 and 1
- **NOTE:** Flooring must be installed in such a manner to allow for up to ½" expansion and ½" contraction of your installed flooring. Bamboo, like all hardwoods, expands and contracts as its moisture content rises and falls.
- Use a combination of wall moldings such as a base-molding and base-shoe together to ensure that the edge of the installed flooring does not strike the wall if it expands and does not show if the flooring shrinks.
- Teragren bamboo flooring is best installed by one of the following methods: Note the method you choose will be dictated by whether or not the flooring is being installed above or below grade (above ground level or below ground level).
- **Above or on grade:** Flooring may be installed by nailing or gluing planks directly to a wooden or concrete subfloor. Note: Do not nail planks to a concrete subfloor.
- **Below grade:** Do not install below grade



Tools Recommended (not all tools may be required):

Nail Installation: Hammer (1 lb.), tape measure, chalk line, pencil, carpenter square, scribing block, flat bar, 1/2" (12.5mm) wedges, saw, chop saw with 80 tooth carbide tipped blade, vapor retarder (wooden subfloor), pneumatic tongue & groove flooring nailer or manual nailer, 1.5" 18 gauge cleat nails or equivalent (see appropriate section below). Note: Nail gauges larger than 18 gauge (e.g. such as 15.5 gauge) will damage 12mm Synergy Strand Bamboo Flooring.

Glue-down Installation: Calcium chloride or equivalent testing system, vapor barrier (concrete subfloor) or vapor retarder (wooden subfloor), premium wood flooring adhesive/vapor barrier system, hammer (1 lb), tape measure, chalk line, pencil, carpenter square, scribing block, flat bar, 1/2" (12mm) wedges, saw, chop saw with 80 tooth carbide tipped blade, low adhesive painter's tape.

Sub-Floor Examination and Preparation:

A vapor barrier such as 6 mil polyethylene film must be placed in crawl spaces. Wood sub-flooring surfaces must have no flex and must be smooth, level, clean, dry, and free of contaminants. Fix any squeaks or movement in the sub-floor prior to flooring installation. The sub-floor surface must be level and smooth prior to flooring installation. Subfloors must be checked for flatness prior to installation and any low spots or voids must be filled to a minimum of 3/16" (4.76mm) within a 10' (3 meter) radius or 1/8" (3mm) in a 6' (1.8 meter) radius, and high spots ground to surface.

INSTALLATION GUIDELINES/Synergy® One and MPL

Acceptable sub-floor specifications include 5/8" (16mm) T&G CD Exposure 1 plywood for 12" (30.5cm) and 16" (41cm) on center floors (OC), 3/4" (19mm) T&G CD Exposure 1 plywood for 16" (40.6cm) to 19" (48.3cm) OC floors, and 7/8" (22mm) T&G CD Exposure 1 plywood for 24" (61cm) OC floors. A sub-floor of 1-1/8" (28.5mm) plywood over joists at 16" (40.6cm) on center is recommended for an optimal installation. Note: the use of particleboard may result in a substandard subfloor due to the lack of rigidity.

Concrete sub-floors MUST be tested for moisture in more than one place for consistent readings. Teragren recommends using a Calcium Chloride Test Method to quantify the volume of moisture vapor radiating from a concrete slab surface over time and / or a Relative Humidity Probe test to quantify the amount of relative humidity within the slab. The use of a Vapor Barrier (over cementitious materials) or a Vapor Retarder (over wood) is mandatory.

Installation:

Nail-down Installations:

Teragren recommends the use of an 18 gauge cleat nailer and 1-1/4" to 1-1/2" cleat nails. The selection and use of any nailer is at the sole discretion and responsibility of the owner/installer. For a list of nailers warranted by their manufacturer(s) as being compatible with Teragren flooring products, please visit http://www.teragren.com/downloads/Teragren_Nailer_Guidelines.pdf.

NOTE: Depending on the geographical area and interior climate control systems of the installation environment, to minimize the impact of material expansion of nailed or glued-down floors that are wider than 20', installers may need to build-in additional spacing between planks and at the edge of rooms. Where additional spacing is required, use a removable spacer between every few rows of planks.

NOTE: Nail gauges larger than 18 gauge (e.g. 15.5 gauge) will damage Synergy Strand Bamboo Flooring.

Install a vapor barrier or vapor retarder over the entire subfloor surface following closely the manufacturer's recommendations.

Due to the extreme hardness of Synergy Strand Bamboo Flooring, it is the responsibility of the installer to determine the correct pressure/psi for their nailer for their unique installation environment. Test nail a sacrificial plank to the sub-floor to check for correct air pressure, surface damage, tongue damage (splitting) etc. before proceeding with the installation.

Flooring should be square with the space and perpendicular to the joists. Leave a 1/2" (12.5mm) expansion space from base plate or wall. Starter rows shall be held firmly in place by gluing, wedging or blind nailing. Once starter rows are secure, additional rows shall be directly above the tongue at a 45-50 degree angle to the face.

Carefully monitor nailer pressure to ensure that the nail head enters the tongue only as deeply as required to allow the adjacent plank to fit properly. Ensure that the nail head rests cleanly in the "nail pocket". Nails shall be placed no closer than 3" from the ends of each plank and then spaced at 6-8" intervals or as required to prevent tongue splitting/damage.

Glue-Down Installations:

Install a vapor barrier. Teragren recommends the use of a low-VOC, premium, water-free flooring adhesive and/or vapor barrier system specifically recommended by the adhesive manufacturer for use with strand bamboo flooring. Note: Always use a vapor barrier and adhesive system manufactured by the same company – never mix products.

The sub-floor must be extremely flat (see adhesive manufacturer's specifications), be square with the space, and run perpendicular to the joists. Leave a 1/2" expansion space from base plate or wall. Starter rows should be held firmly in place using wedges. Once the starter rows are secure, apply the adhesive per the manufacturers' installation instructions. NOTE: Always remove any adhesive from the surface of the flooring (smudges, fingerprints, etc.) before it dries. Clean up as you go – do not wait until the installation is complete. Cured adhesives are very difficult to remove and may permanently damage flooring. Always follow the adhesive manufacturer's installation instructions.

For a list of adhesives warranted by their manufacturer(s) as being compatible with Teragren flooring products, please visit http://www.teragren.com/downloads/Teragren_Adhesive_Guidelines.pdf.

INSTALLATION GUIDELINES/Synergy® One and MPL

It is up to the owner/installer to confirm the warranty, the environmental statements of the manufacturer, and the suitability of any adhesive for the intended end-use. The selection and use of any adhesive / moisture control system is at the sole discretion and responsibility of the owner/installer.

Radiant Heat:

Teragren bamboo flooring is suitable for installation over radiant heating systems capable of maintaining a surface temperature at or below 85°F. When choosing an installer for application over radiant heat, look for members of the Radiant Panel Association. Please refer to www.radiantpanelassociation.org for more information on radiant heat systems.

Rugs placed on a floor heated by a radiant source can increase the surface temperature of that floor by 2-3 degrees Fahrenheit. If using an adhesive to “glue-down” bamboo flooring, please confirm with the adhesive manufacturer the suitability of the adhesive for use with radiant heating systems. Before installing the flooring, activate the radiant heating system and leave it on for at least 21 days prior to installation. Radiant heating systems must be turned off 24 hours prior to and during flooring installation. If no adhesive has been used, the radiant heating system may be reactivated after the flooring installation is complete. If adhesive has been used, follow the adhesive manufacturer’s guidelines regarding adhesive cure time before reactivating the radiant heating system. Please refer to www.radiantpanelassociation.org for more information.

It is up to the owner/installer to confirm the suitability of any radiant-heating system for the intended end-use. The selection and use of any radiant heating system is at the sole discretion and responsibility of the owner/installer.

Maintenance Guidelines:

Teragren recommends vacuuming or sweeping in order to remove dirt and grit prior to cleaning the flooring. Remove any liquid spills promptly. Exposure to the sun and ultra-violet light can accelerate oxidation (color- change). Periodically rearrange rugs and furniture to allow for consistent aging of the flooring. Use area rugs in high traffic areas. Install wood guards on the feet or legs of furniture.

Do not use wax, oil soap or other household cleaners. Teragren recommends using either *WoodWise Floor Cleaner* by [Design Hardwood Products](#) (800.424.7092), or *Bona Swedish Formula® MicroPlus Hardwood Floor Cleaner* by [BonaKemi](#) USA, Inc. (800.574.4674).

Proper care and maintenance can extend the life of your floor for many years; however, at some time a re-coat or total refinishing may be desirable. To re-coat your floor and remain in conformance with the Teragren warranty, follow the manufacturer’s instructions at either of the following:

[Basic Coatings Tykote Sandless Re-coating System](#) (800.441.1934) or [BonaPrep™ Re-coating Adhesion System](#) by [BonaKemi](#) USA (800.872.5515).

Contact your Teragren distributor or retailer for more information or [email tech support](#).