

Installation and Maintenance Manual

General Information

Hill Country Innovations is a fully waterproof Uniclic floating floor with excellent acoustic and thermal properties, made lightweight and rigid core to assist installation over uneven subfloor surfaces. However, it is essential that these installation instructions are followed to ensure a quality fit.

The click profile is extremely stable and strong when installed. Product must be handled with extra care when transporting and must be packed properly to avoid the click profile from getting damaged. If shipping to job sites product should be palletized and shrink wrapped. Warranty will not cover shipping damages.

Tools

For a successful installation, the following tools will be necessary: pencil, utility knife, ruler/straight edge, carpenter's square, cutting saw, hand roller and pull bar. A rubber mallet is optional. A tapping block can be used.

Hill Country Innovations is an indoor product and is **not** suitable for exterior environments or wet room installations.

Expansion Gap

A minimum ¼" (6.35mm) expansion zone is required around the perimeter of the room as well as against any fixed objects. ½" (12.7) expansion zone around the perimeter for rooms over 100' in either direction. The zone accounts for the normal movement of the floor system.

A T-Molding must be used for commercial spaces measuring greater than 50' in either direction. If Hill Country Innovations is installed in an area falling outside the normal room temperature range, a T-Molding is required every 25'. T-Molding is not required in residential installations.

General

One of the benefits of Hill Country Innovations is that it does not need to be acclimated in residential installations but the room temperature, in the area of installation should be between 50°F and 100°F for 48 hours before and during installation. Commercial installations require an acclimation period of a minimum 24 hours in temperatures between 50°F and 100°F. Hill Country Innovations is an indoor product that can be installed in three season facilities and in unheated cabins.

It is always recommended that when exposed to extreme temperatures for extended periods, Hill Country Innovations be allowed to adjust to room temperature for 24 hours prior to extremely heavy traffic loads. Hill Country Innovations is suitable for installation in direct sunlight and due to its structural integrity, it is not affected in the way other products may be.

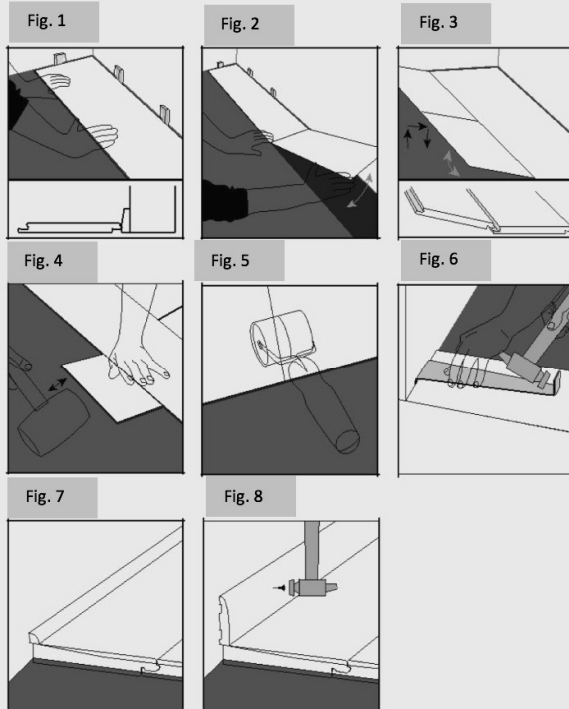
- *However, direct sunlight has a uniform fading effect on virtually all materials over an extended period so, window treatments ranging from blinds to UV inhibitors on glass are recommended.

When installing, be sure to use Hill Country Innovations tiles/planks of the same color lot for best color matching unless specified design is required. Mix tile from several different cartons to blend minor shade variations. The installation of Hill Country Innovations flooring under cabinetry is **NOT** approved. Hill Country Innovations flooring should be cut to fit around cabinetry leaving a minimum ¼" gap so, as to allow for expansion as needed.

Note: All Warranties and guarantees regarding the suitability and performance of any products, if not supplied by Hill Country Innovations, rests with the material manufacturer or the installation contractor and **NOT** with Hill Country Innovations. Install following standard methods of measuring and laying out and cutting resilient tile/plank flooring. Stagger Tiles/Planks do not align end joints next to each other and work out of 3 cartons and mix tile or planks.

If you have any questions regarding any part of these instructions or the Hill Country Innovations product prior to or during installation, please call EJ Welch at 800-775-1234.

1. Install the first plank with the tongue side facing the wall, fit 5mm spacers between the plank and wall (Fig. 1).
2. Lay the first row, ensuring the short edges are clicked together (Fig. 2).
3. Using a knife and straight edge, cut the last piece of the row to size, making sure that there is a $\frac{1}{4}$ " gap between the end of the row and the wall.
4. Start the second row by clicking the tongue into the groove holding the plank at an angle (approximately 30°), then push the tile or plank firmly into the groove of the first row (Fig. 3).
5. Install the next plank by clicking the tongue and groove together along the short edge. Ease the tongue and groove together on the long side by angling the tiles/planks together. Continue to install tiles/planks across the room until the row is complete. Use a rubber mallet and Tapping block to securely fix the planks together (Fig. 4 & 5). A pull bar can be used to pull the product together around the edges of the room (Fig. 6).
6. Repeat sections 4 and 5 until the installation is complete.
7. When installing convex corners, round corners or complex profiles, mark the shape on the plank and cut using a cutting saw.



Once the floor is fitted, remove the spacers; sweep the floor with a soft brush. Fix the skirting boards or suitable edge trim to cover the expansion gaps. These should be fixed to the wall and not the floor (Fig. 7 & 8).

INSTALLATION, SUBFLOOR AND UNDERLAYMENT REQUIREMENTS

Subfloors: In general, all subfloors need to be Structurally Sound (Study, Flat within limits, within moisture limits, free of debris and with no Flex.)

The subfloor needs to be flat with no low or high spots exceeding ¼" in 10' radius and cracks or seams no greater than 3/4" in width. Any areas, cracks or seams exceeding the ¼" in 10' or ¾" width should be sanded and or patched using a Portland cement based patching or leveling compound. All concrete (new and old) must be tested for moisture. The installer is responsible for moisture testing. Concrete moisture vapor emissions should not exceed **8lbs** ASTM F1869 or **90%RH** (ASTM F2170) with a **pH limit of 9**. **Subfloor moisture vapor emission limits are in place to prevent the potential growth of harmful mold and bacteria below the Hill Country Innovations flooring.**

A 6-mil poly moisture barrier is recommended over concrete slabs to prevent moisture vapor emissions from coming through joints and potentially damaging the floor and joint locking mechanism.

Lightweight concretes: Concretes in the lower end of this range are generally used for thermal and sound insulation fills for roofs, walls, and floors. The higher densities are used in cast-in-place walls, floors, roofs, and for pre-cast elements. The minimum density of the concrete should be greater than 90lbs per cubic foot. The minimum compressive strength of recommended concrete should be 3,500 psi. Gypsum based underlayment products are approved with or without the G-Core backing or a separate acoustical underlayment. Strength and integrity are the most important factors of any subfloor or underlayment. Older Gypsum based subfloors have a chalk like consistency and can breakdown over time creating granular debris. Damaged or degraded materials under any floating or rigid system can create an acoustic issue. Hill Country Innovations has very good acoustic properties however, the breakdown of supporting or subfloor material is always something to be aware of. **Installing Hill Country Innovations flooring using adhesive to bond to substrate will prevent the materials ability to adjust to climactic conditions thus preventing expansion and contraction. You must contact Hill Country Innovations Technical Services department for application evaluation and approval prior to any substrate mechanical bonding installation.**

Wood subfloors: Plywood: Minimum ½" or greater, exterior grade. Other wood subfloors should be standard double layer construction, with a finished thickness of at least 1" and should have 18" of well-ventilated air space underneath. Crawl spaces should be insulated and protected by a vapor barrier. Do not install vinyl flooring over a sleeper type subfloor, or over plywood that is directly over a concrete slab.

Radiant Heat: Heating components/elements must have minimum of 1/2" separation from the Hill Country Innovations flooring for approval of installation. Heated subfloors should be operational for at least 3 weeks prior to installation to drive out existing moisture and calibrate temperature settings which, will avoid any subfloor condensation issue from excessive temp and humidity swings during installation. Maximum operating subfloor radiant heating temperature should never exceed 105°F for reasons of potential subfloor breakdown or structural damage.

Quarry tile, terrazzo, and ceramic tile: Fill and level low spots, grout lines, holes, chips and seams with a Portland cement based patching or leveling compound for strength and integrity. This helps prevent any unnecessary acoustic issues created by voids under the new flooring if not using G-Core or an acoustic underlayment.

Existing Resilient Floors: The preference is to always to start with a clean new surface, Hill Country Innovations can be installed over existing resilient flooring material as long as it is structurally sound, bonded tightly with no loose or cracked tiles, planks or sheeting. The exception is any tile, plank or sheet that is of a cushion construction. The cushioned flooring material must be removed or covered.

***Do not** install over more than one layer of existing flooring.

Material Handling and Storage

Store Hill Country Innovations in a consistent temperature environment. Excessive temperature swings immediately prior to installation have the potential of causing condensation between the subfloor and Hill Country Innovations which, could promote the growth of harmful mold or bacteria. A consistent temperature during storage is always recommended for any product.

- Hill Country Innovations must be stored lying flat and cartons never on edge. Check to make sure color and lot numbers are the same on jobs requiring more than one box on tile.
- Mix tile from several different cartons to blend minor shade variations.
- Moisture: Never install Hill Country Innovations in standing subfloor moisture. New concrete slabs must cure for a minimum of 90 days for full cure strength and integrity. Even existing concrete slabs can have moisture problems so conducting proper moisture test will also help assess other materials capabilities on site. To be sure, conduct a moisture test several days before installation. The installer is responsible for moisture testing. See subfloor section above for guidelines. MOISTURE GUIDELINES FOR THE FLOOR COVERING INDUSTRY available from the World Floor Covering Association, at 1-800-6880.

HVAC

Hill Country Innovations does not need to be acclimated. However, the room in which the material will be installed needs to be at standard room temperature setting of 50°F and 110°F for a minimum of 48 hours prior to and during installation. This is to avoid any potential condensation between the subfloor and Hill Country Innovations due to large and fast temperature swings immediately after installation.

Removing Old Adhesives

Old asphaltic “cut-back” adhesives can stain Hill Country Innovations flooring. These must be completely removed, encapsulated or covered with plywood underlayment. Be sure to remove adhesive in dips, joints, etc. Some previously manufactured cutback adhesives contained asbestos fibers, which are not readily identifiable. Do not use power removal devices, which can create dust. The use of solvent-based adhesive removers is not recommended. NOTE: If d-limonene (citrus- based) cleaners/removers are used (Orange All), subfloor must be thoroughly rinsed. If complete removal of old adhesives or covering them with plywood is not possible, the use of a Portland Based Leveling or Patching Compound is acceptable. Please follow manufacturer’s instructions carefully. For “Recommended Work Practices for the Removal of Resilient Floor Coverings” write to the Resilient Floor Covering Institute, 966 Hungerford Dr., Suite12-B, Rockville, MD 20850.

Patching & Leveling

For best results, It is always our recommendation to use Portland cement based patching and leveling compounds. However, acrylic skim coat products are approved if warranted by that manufacturer over the substrate to which it's being applied. Self-leveling patching and leveling compounds can have very high moisture content and require longer curing time: up to 10 days. Check with a moisture meter before starting installation. Note: Adding latex to levelers will normally make the floors NON-POROUS. If using adhesive, test for porosity and use the non-porous adhesive instructions if necessary. Follow all the manufacturer's requirements for moisture limits. Sand underlayment smooth after it is cured. The installer is responsible for cure times, moisture content, adhesive bonding, if being used and the structural integrity of a leveling or patch compound to meet the acceptable limits for surface deviation. Hill Country Innovations is very resistant to telegraphing but proper steps and attention to limitations with regard to subfloor preparation need to be taken.

Contact Hill Country Innovations with any questions regarding product or installation at 800-775-1234.

MAINTENANCE

The type or frequency of traffic on your Plank will determine the frequency of maintenance needed. The color of the floor will have some bearing on how much care may be necessary. Regular adherence to an effective maintenance program should include: Thorough dirt and grit regulation, Prompt removal of spills and stains, Protection of the floor surface. The most effective part of any floor maintenance program is the simplest: sweep, dust mop or vacuum DAILY, or more frequently if needed.

COMPLETION OF THE INSTALLATION

- Lightly damp mop with a Hill Country Innovations Neutral Cleaner or Hill Country Innovations No Rinse Cleaner. Remove any scuffs and excessive soil by careful scrubbing. Certain types of rubber heel marks may be removed by rubbing with a cloth dampened with Hill Country Innovations Adhesive / Scuff Remover.
- Although Hill Country Innovations has a tremendous PSI load rating, it is always recommended for any flooring product that proper precautions be taken prevent possible indentations and scratches. It is always our recommendation to provide glass, plastic or other non-staining cups with flat under surfaces not less than 2" in width for the legs of heavy furniture or appliances.
- Equip swiveled-type office chairs and other rolling furniture with broad surface non-staining casters at least 2" in diameter. Remove small diameter buttons from the legs of straight chairs and replace with metal glides that have bearing surfaces not less than 1" in diameter.
- Protect your floor against burns. Burns from the glowing embers, the end of a cigarette, matches, or other extremely hot items can damage Hill Country Innovations floors.

ROUTINE COMMERCIAL MAINTENANCE

- Hill Country Innovations will perform commercially provided a sound maintenance program is followed. Light daily sweeping, dust mopping or vacuuming will prevent dirt and grit particles from being ground into the surface of the plank.
- Non-rubber, non-staining walk off mats should be used to control the amount of dirt and grit reaching the floor. The mats should be as wide as the doorway and thick enough to trap dirt and should be cleaned on a regular basis.
- Frequent light mopping will prevent the floor from becoming heavily soiled and will remove most spills and stains. The amount and type of traffic will dictate the frequency of washing. Wash the floor by damp mopping with Hill Country Innovations Commercial Cleaner diluted with warm water. If the floor receives hard use and becomes extremely dirty, as in heavily commercial installations, an occasional scrubbing may be necessary. This can be accomplished by using a low speed buffer 300 RPM or less with a red scrubbing-type (polyester or nylon) pad. Spray the floor with Hill Country Innovations Commercial Cleaner and work the solution over the floor using the buffer and the scrubbing pad. Once this is accomplished, remove the dirty residue by damp mopping with clear water or with a wet vacuum.

STAIN REMOVAL

To remove stubborn spots or stains from tiles/planks, always begin with mild cleaners, such as Hill Country Innovations Neutral Cleaner or Hill Country Innovations No Rinse Cleaner. If this fails to remove stain, use Mineral Spirits sparingly and be sure to do a test area prior to using on entire floor. Do not use harsh solvents, such as Acetone, or lacquer thinner, as these type products can permanently soften and damage the surface. For extreme staining, (paints, permanent markers, dyes) try applying fingernail polish remover containing Acetone (**not straight Acetone**) applied to soft cloth and rubbing. Any damage resulting from use of pure solvents is **NOT** covered by the warranty.

Always test stronger cleaning agents on sample pieces or in unnoticeable areas first before attempting on affected areas.

SCUFFING AND SCRATCHING

Although Hill Country Innovations is resistant to scuffing and scratching, surface damage can occur with hard enough use, or if floor is improperly maintained. If damage occurs, try using Hill Country Innovations Scratch Remover spray bottle or hand buffing the spot with 0000 steel wool, using a solution of mineral spirits. If damage is deep, try using 000 steel wool Hill Country Innovations Scratch Remover will mask minor scratches and scuffs; For “Spot” repairs only – not to be used as a floor coating.

HILL COUNTRY INNOVATIONS FLOORS MAINTENANCE PRODUCTS

- **Hill Country Innovations Scratch Remover**
 - This product is designed to improve the appearance of resilient floor surfaces; Scratch Remover masks minor scratches and scuffs. For use in high traffic areas, under furniture or whenever gloss has been affected by wear or abrasion. Available in 22oz spray bottle
- **Hill Country Innovations Commercial Buffable Neutral Cleaner (Concentrate)**
 - This product is a specially formulated cleaner and restorer which deposits a buffable film after cleaning. During cleaning this product quickly and easily removes soil and residue from spills such as soft drinks, etc...this product is phosphate free. Available in 1 quart and 1 gallon bottles
- **Hill Country Innovations Neutral Cleaner (Concentrate)**
 - This product is a cleaner concentrate formula specifically for damp mopping and maintaining resilient plank and tile flooring. This no-rinse formula does not leave a haze or residue which has a dulling effect. This product is phosphate free. Available in 1 quart and 1 gallon bottles
- **Hill Country Innovations No-Rinse Neutral Cleaner**
 - This product is a neutral cleaner ready-to-use formula specifically for maintaining resilient plank and tile flooring. This no-rinse formula does not leave a haze or residue which has a dulling effect. This product is phosphate free. Available in 22oz spray bottle
- **Hill Country Innovations Black Scuff Remover**
 - This product removes daily scuff marks from black heels marks, etc.. Available in 22oz spray bottles.
- **Hill Country Innovations Micro-Care Cleaning Mop**
 - Picks up moisture and dirt, leaving floors clean with no dulling scratches’
 - 360° rotating head and telescopic handle for hard-to-reach areas
 - Conforms to the surface of your floor
 - Frame folds towards the pole for easy storage
 - The cleaning pads are durable, machine washable and reusable for up to 200 times
 - Lightweight but extremely durable aluminum mop with end caps to protect furniture and baseboards
 - Use Hill Country Innovations No-Rinse Neutral Cleaner for wet cleaning, spray on pad or directly on the floor. Follow directions on bottle.

www.hillcountryinnovations.com

EJ Welch at 800-775-1234