

Installation



TECSUN LIGHTHOUSE INSTALLATION GUIDELINES

I. GENERAL INFORMATION

All instructions and recommendations should be followed for a satisfactory installation.

- Acclimation of material prior to installation is not required, however, the floor covering should be installed in a climate controlled environment with an ambient temperature range between 55° - 85°F (13°-29°C) or average temperature of 70°F (21.1°C).
- For installations involving 3 season scenarios, meaning, the dwelling or installed space is without climate control for extended periods during certain seasons of the year, the post installation temperature range allowed is an ambient room temperature between 50°F and 100°F. This allowance is for floating floor installations.
- Avoid exposure to direct sunlight for prolonged periods, doing so may result in discoloration. During peak sunlight hours, the use of drapes or blinds is recommended. Excess temperature due to direct sunlight can result in thermal expansion and UV fading.
- Install product after all other trades have completed work that could damage the flooring.
- To minimize shade variation, mix and install planks from several cartons.
- Inspect all planks for damage before installing. If you have any concerns about the product fit or finish, call Tecsun Information Services at 1-877-883-2786. Claims will not be accepted for flooring that has been cut to size and/or installed.
- Use cementitious patching and leveling compounds that meet or exceed maximum moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable.
- Installation Methods: Floating (on, above or below grade)
- Maintain a 3/8-inch (10mm) expansion space around all walls and vertical objects. Quarter round or baseboard molding will cover this expansion space. Maintain the 3/8-inch space around cabinets, pipes, toilet flanges and any obstacle in the floor (It is not recommended to trim around a toilet, however leave the expansion space around the toilet flange) **A T-molding is required for greater than 40 feet in length or width.** A 1/4-inch expansion space must also be for undercut jambs and casing.
- This flooring is waterproof and reliably secures the flooring panels on all four sides. However, excessive moisture in the subfloor could promote mold, mildew, and other moisture related issues like the trapping of moisture emissions under the flooring, which may contribute to an unhealthy indoor environment.
- It is up to the flooring contractor to determine if a subfloor is suitable and meets the subfloor requirements stated in the installation guide. If not, a moisture barrier/mitigator like 6 mil poly is required for a successful installation and to prevent the material from being damaged by moisture, and hydrostatic pressure from the subfloor.

II. SUBFLOOR INFORMATION

All subfloors must be clean, flat, dry and structurally sound. The correct preparation of the subfloor is a major part of a successful installation. Subfloor must be flat – 1/8" in 10'.

A. WOOD SUBFLOORS

Do not install material over wood subfloors that lay directly on concrete or over dimensional lumber or plywood used over concrete. Refer to ASTM F1482 for panel underlayment recommendations.

1. Do not apply sheet plastic over wood subfloors.
2. Basements and crawl spaces must be dry. Use of a 6 mil black polyethylene is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist is to be no less than 18" and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space

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- area to provide cross ventilation. Where necessary, local regulations prevail.
3. **DO NOT** install over sleeper construction subfloors or wood subfloors applied directly over concrete.
 4. All other subfloors - Plywood, OSB, particleboard, chipboard, wafer board, etc. must be structurally sound and must be installed following their manufacturer's recommendations. Local building codes may only establish minimum requirements of the flooring system and may not provide adequate rigidity and support for proper installation and performance. If needed add an additional layer of APA rated underlayment, fasten and secure according to the underlayment manufacturer's recommendations.
 5. Resilient flooring is not recommended directly over fire-retardant treated plywood or preservative treated plywood. An additional layer of APA rated 1/4" thick underlayment should be installed.

B. CONCRETE SUBFLOORS

NEW AND EXISTING CONCRETE SUBFLOORS SHOULD MEET THE GUIDELINES OF THE LATEST EDITION OF ACI 302 AND ASTM F 710, "STANDARD PRACTICE FOR PREPARING CONCRETE FLOORS TO RECEIVE RESILIENT FLOORING" AVAILABLE FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, 100 BARR HARBOR DRIVE, WEST CONSHOHOCKEN, PA 19428; 610-832-9585; HTTP://WWW.ASTM.ORG.

1. Subfloors shall be smooth, permanently dry, clean, and free all foreign material such as dust, wax, solvents, paint, grease, oils, and old adhesive residue. The surface must be hard and dense, and free from powder or flaking.
2. Concrete slabs must be dry with no visible moisture.
3. Required Moisture Testing - maximum moisture level per ASTM 1869 CaCl is 5 lbs.
4. Do not install over concrete with a history of high moisture or hydrostatic conditions. Excessive moisture in the subfloor could promote mold, mildew, and other moisture related issues like the trapping of moisture emissions under the flooring, which may contribute to an unhealthy indoor environment. Tecsun Flooring does not warrant nor is responsible for damage to floor covering due to moisture related issues.
5. pH level of concrete should be between 7-10.
6. The final responsibility for determining if the concrete is dry enough for installation of the flooring lies with the floor covering installer.

NOTE: IT IS THE FLOOR COVERING INSTALLER'S RESPONSIBILITY TO CONDUCT THESE TESTS. IT IS THE FLOOR COVERING INSTALLER'S RESPONSIBILITY TO MAKE SURE THESE TESTS HAVE BEEN CONDUCTED, AND THAT THE RESULTS ARE ACCEPTABLE PRIOR TO INSTALLING THE FLOOR COVERING. WHEN MOISTURE TESTS ARE CONDUCTED, IT INDICATES THE CONDITIONS ONLY AT THE TIME OF THE TEST.

C. EXISTING FLOOR COVERINGS

Flooring can be installed over most existing hard-surface floor coverings, provided that the existing floor surface is fully adhered, clean, flat dry structurally sound and free of deflection.

- Existing sheet vinyl floors should not be cushioned and not exceed more than one layer in thickness. Soft underlayment and soft substrates will compromise the product's locking ability as well as diminish its indentation resistance.
- Installation is **NOT** allowed over any type of carpet.
- Do **NOT** install over wood floors adhered to concrete.
- Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in and on the subfloor may affect the new floor covering.
- This product can be installed over existing ceramic/porcelain tile products with up to a 1/4 inch wide grout joint. If the grout joint width exceeds 1/4 inch, a cementitious patching compound should be used to fill the grout joint to make it smooth with the surface of the tile.

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III. INSTALLATION

Tools: Tape Measure, Utility Knife, Jigsaw, Tapping Block or Rubber Mallet, Pull Bar, 1/4" Spacers, T-Square, Safety Glasses, Broom or Vacuum and, Chop saw, if necessary, tools for subfloor repair.

Installation of 6 mil Poly Film Underlayment is necessary for an installation over a concrete subfloor.

- For use over concrete substrates - seams **MUST** be taped.
- Optional over wood substrates – do **NOT** tape seams.
- Begin at the starting wall. Roll underlayment out parallel to the starting wall and allow the poly film to run 2 inches up the wall.
- After the flooring has been installed trim back the poly film from the wall.
- Roll the next course of poly film parallel to the first run and overlap a minimum of 4 inches. Smooth out any wrinkles or creases in the poly film. Use clear tape to tape the seams together when installed over concrete substrates.
- Continue to install the flooring over top of the poly film taking care not to damage the poly film.

Note: Do not cover the entire area of the substrate to prevent damage or present a slip hazard. Roll the poly film out one row at a time.

Floating Installation

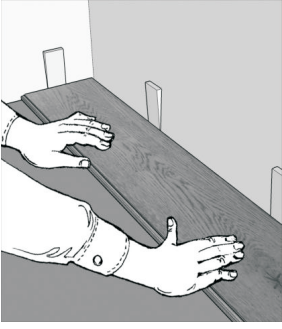
SPC plank flooring is designed to be installed utilizing the floating method. Proper expansion space 1/4" (6.35 mm) is required. Undercut all doorjamb. Do not fasten wall moldings and or transition strips to the planks.

Installation

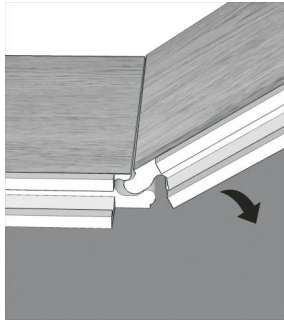


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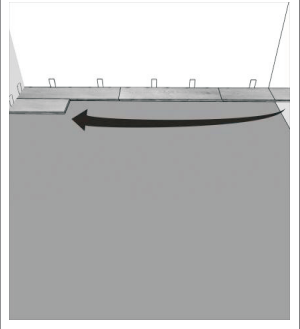
1. Begin the installation working from left to right. Insert the Spacers at the ends and edges where planks meet wall.



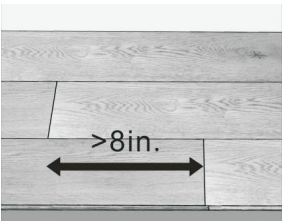
2. Lock short end of plank by inserting tongue into groove at an angle and drop in place. Continue to the end of the first row.



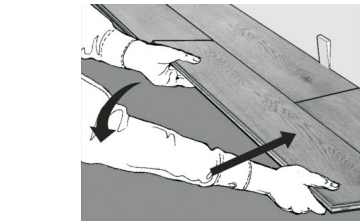
3. Use leftover plank from first row as starter for second row working from left to right.



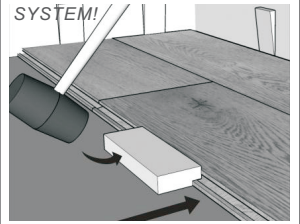
4. There must be at least 8" between plank end joints on adjacent rows.



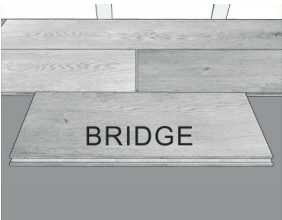
5. Lock long edge of plank by inserting tongue into groove at an angle and drop in place. Slide plank toward end of previously installed plank until the tongue just touches the groove.



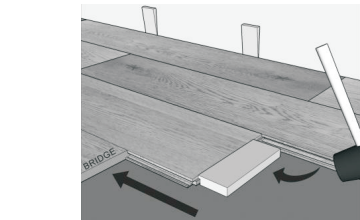
6. IMPORTANT! Use rubber mallet and tapping block to tap long edge of plank to ensure a tight fit. ANY GAPPING CAN COMPROMISE THE LOCKING SYSTEM!



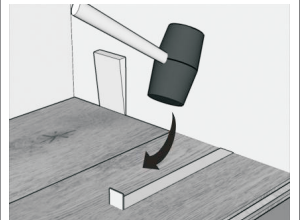
7. Attach a scrap piece of floor to bridge gap between ends of planks.



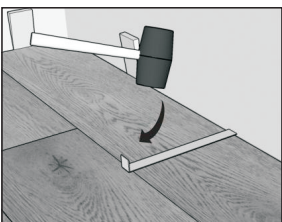
8. Tap end of plank with rubber mallet and tapping block to lock ends of planks together. Remove bridge and continue towards wall until installing the final plank in the row. Be sure to tap on edge of tapping block so as not to damage locking profile.



9. Use rubber mallet and pull bar to lock final piece in row. Insert spacer at end of row. Continue installation to final row.



10. Use rubber mallet and pull bar to lock long edges of planks on final row.

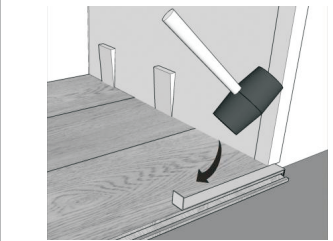


Installing Under Door Jamb

11. Undercut space under door jamb to allow plank to slide freely. Tap long edge with rubber mallet and tapping block to lock long edge.



12. Use rubber mallet and pull bar to lock short end of plank.



Warranty



LIGHTHOUSE VINYL FLOORING WARRANTY

This document contains all the details of coverage and limitations for Lighthouse® flooring planks:

- 50 Year Limited Residential Wear Warranty
- 5 Year Limited Light Commercial Wear Warranty
- Lifetime Limited Waterproof Warranty
- Lifetime Limited Structure Warranty



50 Year Limited Residential Wear Warranty

The vinyl layer of the floor planks are warranted not to wear through under normal use for 50 years from the date of purchase. Vinyl layer wear-through is defined as 100% vinyl layer wear-through that exposes the core material over a minimum of 3% of the total installation. (Gloss reduction or surface scratches are not considered surface wear, that is not covered by this warranty.) A dull finish can be corrected with spot or overall recoating care systems. If 100% vinyl layer wear-through is determined to have occurred, Tecsun will arrange a pro-rated credit based on the terms outlined below in the section headed “Terms of 50 year Limited Warranties”. This warranty is non-transferable and applies only to the original purchaser.

This 50 year limited residential wear warranty is made subject to the following conditions:

1. The floor must be installed properly and according to Tecsun's installation instructions
2. The flooring must be used only indoors in a climate controlled area.
3. The flooring must be maintained in accordance with Tecsun maintenance instructions.
4. This limited warranty does not apply to Tecsun moldings and trims.
5. Installation of flooring that contains any manufacturing defect is not covered by this limited wear warranty.

Lifetime Limited Structure Warranty

The floor planks are warranted to be free from manufacturing defects for the life of the product. Should a defect occur, Tecsun will arrange a credit based on the original purchase of the product. Should a problem attributable as a manufacturing defect develop after flooring is installed, the reasonable cost of labor for repair will be covered by this warranty. This warranty is not transferable. You must provide a proof of purchase with a receipt from a retailer.

Lifetime Limited Structure Warranty Coverage: Upon determination of a valid manufacturing defect, credit will be issued to the dealer and will be good toward the purchase of a replacement. When a defective product is installed, credit applies to material only and does not include labor since it is the responsibility of the installer to determine suitability of material prior to installation. Should a problem attributable to a manufacturing defect develop after flooring is installed, the cost of labor for repair will be covered by the Lifetime Limited Structure Warranty.

Warranty



LIGHTHOUSE VINYL FLOORING WARRANTY

The 50 year Limited Residential Wear and Lifetime Limited Structure Warranty does not cover:

1. Damage caused by improper installation and/or maintenance.
2. Differences in color between products and samples or photographs.
3. Problems arising from excessive moisture, alkali or hydrostatic pressure from the sub floor, floods, indentation from improper loading including heavy static loads, spiked shoes, or other furniture not using floor protectors.
4. Cracking, warping, soiling, fading, improper maintenance or abuse caused by items such as roller skates and/or golf shoes.
5. Surface scratches, changes in shading, texture and/or gloss during use.
6. Damage caused by chemically reactive material, adhesive or tape, dye, mold, stains, spillage, burns, gouges, scratches, indentations, accidents, abuse or any harsh scouring pads while buffing.
7. Damage due to U.V. light and thermal heat sources or damage to floor caused by flooring that is installed using the floating method that subsequently is heated to temperatures above those specified in the product specific installation instructions.
8. Damage caused by non-compliant casters on furniture. Barrel-type caster wheels or wide, flat glides are best for protecting the floor. For areas with rolling chairs (e.g. desk area), ensure a protective mat is used under the chair.

Limited Lifetime Waterproof Warranty – This warranty covers topical moisture as long as the water does not flow over the edge of the surface (edge of the room, cut boards, etc.). Tecsun warrants that for the lifetime of stated warranty period from the date of original purchase, your Tecsun product will not swell, cup or crack due to:

- Normal cleaning practices (see care and maintenance document for additional information)
- Moisture due to everyday household spills (see care and maintenance document for additional information)

The Lifetime Limited Waterproof Warranty does not cover:

1. While topical moisture will not affect the product's integrity, it is possible that, when excessive moisture accumulates in buildings, subfloors, or on building materials, mold (and/or) mildew growth can occur - particularly if the moisture problem remains undiscovered or unaddressed. In addition, such excessive moisture level can cause the ends and/or sides of the product to lift/flare due to the vapor pressure from underneath. Such damage from excessive moisture levels (as outlined in the installation instructions document) are not covered by this warranty. All sources of subfloor moisture should be remedied prior to installation.
2. Damage to surrounding structure, walls, subfloor, fixtures, furniture, underlayment, moldings, trims, subfloor heating elements, or anything that is not the floor plank.
3. Damage resulting from mold & mildew growth due to prolonged exposure to moisture.
4. Flooring that is installed outdoors.

Terms of Lifetime Limited Warranty:

- **Within Two Years:** Claims on defects of this product as covered by this warranty that are reported in writing within two year of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. Reasonable labor costs are included.
- **Between Two - Ten Years:** Claims on defects of this product, as covered by this warranty, that are reported in writing after two years but within ten years of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. 50% of labor costs will be covered.
- **After Ten years:** Claims on defects of this product, as covered by this warranty, that are reported in writing after ten years of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. Labor costs are not included.

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LIGHTHOUSE VINYL FLOORING WARRANTY

Terms of 50 Year Limited Warranty:

- **Within One Year:** Claims on defects of this product as covered by this warranty that are reported in writing within one year of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. Reasonable labor costs are included.
- **Between One - Seven Years:** Claims on defects of this product, as covered by this warranty, that are reported in writing after one year but within seven years of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. 50% of labor costs will be covered.
- **Between Seven - Fifty years:** Claims on defects of this product, as covered by this warranty, that are reported in writing after seven years but within fifty years of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. Labor costs are not included.

5 Year Light Commercial Limited Wear Warranty

We warranty the vinyl layer of the floor plank will not wear through under normal light commercial use for a period of five (5) years from the date of purchase.

The vinyl layer of the floor plank is warranted by Tecsun Building Products not to wear through under normal Light commercial use for a period of (5) years from the date of purchase. Vinyl layer wear-through is defined as 100% vinyl layer wear-through that exposes the core material over a minimum of 3% of the total installation. (Gloss reduction or surface scratches are not considered surface wear and are not covered under this warranty.) Dull finish can be corrected with spot or overall recoating care systems. If 100% vinyl layer wear-through is determined to have occurred, Tecsun will arrange a pro-rated credit based on the terms outlined below in the section headed "Terms of 5 Year Light Commercial Warranty". This warranty is non-transferable and applies only to the original purchaser and only if used in the following commercial areas:

- **Retail:** Novelty Shops/Boutiques, Product Display Areas, Sales Floors, Showrooms, Hair Salons, Hallways, Entryways (walk off mats required)
- **Medical Offices:** Waiting Rooms, Patient Rooms, Examination Rooms, Storage Rooms, Hallways, Entryways (walk off mats required)
- **Hotels:** Guest Rooms, Conference/Meeting Rooms, Lobby (walk off mats required)
- **Offices and Restaurants:** Offices, Conference/Meeting Rooms, Showrooms, Restaurant Floor, Break Rooms. (walk off mats required)
- **Institutional:** Classrooms, Training Rooms, Meeting Rooms, Commons Areas, Residence Halls, Hallways. (walk off mats required)

This 5 year limited light commercial wear warranty is made subject to the following conditions:

1. The floor must be installed properly and according to Tecsun's installation instructions.
2. The flooring must be used only indoors in a dry, climate controlled area.
3. The flooring must be maintained in accordance with Tecsun maintenance instructions.
4. This limited warranty does not apply to Tecsun moldings and trims.
5. Installation of flooring that contains any manufacturing defect is not covered by this limited wear warranty.

The 5 Year Light Commercial Limited Wear Warranty does not cover:

1. Damage caused by improper installation and/or maintenance.
2. Differences in color between products and samples or photographs.
3. Problems arising from excessive moisture, alkali or hydrostatic pressure from the sub floor, floods, indentation from improper loading including heavy static loads, spiked shoes, or other furniture not using floor protectors.
4. Cracking, warping, soiling, fading, improper maintenance or abuse caused by items such as roller skates and/or golf shoes.
5. Surface scratches, changes in shading, texture and/or gloss during use.
6. Damage caused by chemically reactive material, adhesive or tape, dye, mold, stains, spillage, burns, gouges, scratches, indentations, accidents, abuse or any harsh scouring pads while buffing.

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7. Damage due to U.V. light and thermal heat sources or damage to floor caused by flooring that is installed using the floating method that subsequently is heated to temperatures above those specified in the product specific installation instructions.
8. Damage caused by non-compliant casters on furniture. Barrel-type caster wheels or wide, flat glides are best for protecting the floor. For areas with rolling chairs (e.g. desk area), ensure a protective mat is used under the chair.

Terms of 5 Year Light Commercial Limited Wear Warranties:

- **Within One Year:** Claims on defects of this product as covered by this warranty that are reported in writing within one year of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. Reasonable labor costs are included.
- **Between Year One - Two:** Claims on defects of this product, as covered by this warranty, that are reported in writing after one year but within two years of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. Tecsun will pay 50% of reasonable labor costs.
- **Between Year Two - Five:** Claims on defects of this product, as covered by this warranty, that are reported in writing after two years within five years of purchase, Tecsun will arrange a credit based on the original purchase of the product or replace the product. Labor costs are not included.

Floor Care & Maintenance

Newly Installed

- Always use a plywood sheet of a minimum of ½" thick when moving heavy objects across the floor.
- Sweep, dust mop or vacuum the floor to remove all loose dirt and grit.
- Lightly damp mop with well wrung mop. **Initial & Routine Maintenance (Daily or as needed)**
- Sweep, dust mop or vacuum the floor to remove all loose dirt and grit. Do not use treated dust mops.
- Clean the floor using a properly diluted Neutral pH cleaner in cool water or ready to use spray cleaner that will not leave a residue such as Bona Professional Series Stone, Tile, and Laminate Cleaner in a pre-mixed spray bottle. **Follow label instructions.**

Over time floors may begin to lose their luster and may require an application of floor polish. When and where you apply the floor polish will depend on the traffic the floor receives. A good quality floor polish like "Hilway Direct" can provide up to a year of protection in a high traffic area.

Floor Polish Application Directions:

Vacuum or dry sweep then damp mop floor to remove loose dirt and soil from floor. Clean floor with Neutral pH cleaner to remove all soil. **Follow label instructions.**

Prevention

The single greatest cause of damage to any flooring or floor finish is abrasion from dirt and grit. Wherever possible, use walk off mats at entrances and doorways. Use non-staining floor protectors under heavy furniture, chairs, and tables.

How to Make a Claim

Any claim made under either of these limited warranties must be made by contacting your retailer within 30 days after the basis of the claim is detected. In addition, any claim under either of these limited warranties must be made before the end of the applicable limited warranty period. Proof of purchase including the date of purchase, must be presented to make a claim.