

ENDURANCE® PLANK & TILE INSTALLATION GUIDE



ENDURANCE PLANK AND TILE

Product	Plank	Plank	Tile
Size: (Nominal)	4" x 36"	6" x 36"	16" x 16"
	(10.16cm x 91.44cm)	(15.24cm x 91.44cm)	(40.6cm x 40.6cm)
Ft²/Carton:	36 (3.34m ²)	36 (3.34m ²)	35.6 (3.31m ²)
Pieces/Carton:	36	24	20

Installation System: Endurance Plank and Tile can be installed directly adhered to the subfloor or as a floating floor over Congoleum Underflor.

Adhesive: Use Congoleum AD-32 pressure sensitive adhesive for all recommended applications where flooring will be bonded directly to the subfloor or over Underflor.

AD-32 Adhesive: **Trowel :** 1/16" x 1/32" x 1/32"
(1.6mm x .08mm x .08mm)
Coverage: 200-250 ft²/gallon
(18.5 to 23.2 m²/3.78 L)

WARNING

Existing Resilient Flooring

⚠ WARNING: DO NOT SAND, DRY SWEEP, DRILL, SAW, BEADBLAST, OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUT-BACK" ADHESIVE, OR OTHER ADHESIVE. THESE PRODUCTS MAY CONTAIN ASBESTOS FIBERS AND/OR CRYSTALLINE SILICA. AVOID CREATING DUST. INHALATION OF SUCH DUST IS A CANCER AND RESPIRATORY TRACT HAZARD.

Various federal, state, and local government agencies have regulations governing the removal of in-place asbestos containing material. If you are considering the removal of a resilient floor covering structure that contains or is presumed to contain asbestos, you must review and comply with all applicable regulations. Regulations outside the United States may vary.

Copies of the Resilient Floor Covering Institute Recommended Work Practices for the Removal of Resilient Floor Coverings are available from:

Resilient Floor Covering Institute
401 East Jefferson Street
Suite 102
Rockville, MD 20850
www.rfci.com

MOLD AND MILDEW ISSUES

Prior to removing an existing floor following the RFCI Recommended Work Practices for Removal of Resilient Floor Coverings (unless state or local law requires other measures), if there are visible indications of mold or

mildew or the presence of a strong musty odor in the area where resilient flooring is to be removed or installed, the source of the problem should be identified and corrected before proceeding with the flooring work. To deal with mold and mildew issues you should refer to the EPA guidelines that address mold and mildew. Depending on the mold and mildew condition present, those remediation options range from clean up measures using gloves and biocide to hiring a professional remediation contractor to address the condition. Remediation measures may require structural repairs such as replacing the underlayment and/or subfloor contaminated with mold and mildew as a result of prolonged exposure to moisture.

The EPA mold guidelines are contained in two publications "A Brief Guide to Mold, Moisture and Your Home" (EPA 402-K-02-003) and "Mold Remediation in Schools and Commercial Buildings" (EPA 402-K-01-001). Appendix B of the "Mold Remediation in Schools and Commercial Buildings" publication describes potential health effects from exposure to mold, such as allergic and asthma reactions and irritation to eyes, skin, nose and throat. These publications can be located on EPA's website at www.epa.gov/iaq/molds/.

GENERAL INFORMATION

It is important that flooring products maintain proper temperature at the time of installation in order to minimize thermal dimensional changes. The subfloor, all flooring material, and adhesive must be conditioned at a constant temperature between 65°F (18°C) and 85°F (29°C) for 48 hours prior to, during and 48 hours after installation. Thereafter, maintain a room temperature between 55°F (13°C) and 100°F (38°C).

When using flooring from two or more cartons, make sure pattern and run numbers found on the carton are the same. This information is stenciled on the outside of each carton.

Tools and Materials

- Underflor (optional)
- AD-32 Adhesive - recommended
- DS100 Adhesive - alternative
- 1/16" x 1/32" x 1/32" notched trowel
- 100-pound, 3-section, steel roller
- Chalk line
- Carpenter square
- Utility knife (tile cutter optional)
- Cutting board
- Tape measure

PREPARING THE AREA

- Move all furniture, appliances, and fixtures from the room.
- Remove all binding strips or other restrictive molding from doorways, walls, etc.
- Undercut wood door casing where possible so that the flooring can be slid under it.

SUBFLOOR REQUIREMENTS

Endurance Plank and Tile can be installed directly bonded to the subfloor or as a floating floor over Congoleum Underflor. The existing subfloor type and condition, preparation involved, cost and replacement ease, are all important considerations when selecting the best installation method for a particular job. The chart below provides a list of common subfloors and requirements for each installation method.

Subfloor Surface	When Installed over Underflor	When Directly Adhered to Subfloor
Suspended Wood subfloor over joist or trusses up to 19.2" OC	<ul style="list-style-type: none"> • Single layer Sturd-I-Floor rated panel 23/32" or heavier. • Double layer construction, minimum 1" thick. 	Double layer construction, minimum 1" thick with suitable underlayment panel. Do not install directly adhered over oriented strand board or particle board.
Wood Underlayments	Plywood and other hardwood veneer panels, oriented strand board, NPA rated particle board.	APA rated Underlayment grade plywood and other underlayment grade veneer panels.
Concrete, on, above and below grade	With vapor emissions up to 5 pounds.	With vapor emissions up to 3 pounds.
Lightweight Concrete and Gypsum Topping with a minimum 2000 psi compression rating	Preferred Method Must be smooth, dry and in sound condition. Repair all cracks and damaged areas.	Must be smooth, dry and in sound condition. Repair all cracks and damaged areas. Seal with a sealer/primer recommended by the topping manufacturer. A bond test is recommended. Do not install over powdery surfaces.
Radiant Heated Floors	Preferred Method	Gapping at end joints can occur with temperature fluctuations.
	The temperature of the floor should be limited to a maximum temperature of 75°F (24°C) for 24 hours before, during and 48 hours after installation. Thereafter the maximum floor temperature should not exceed 85°F (29°C).	
Existing Resilient Flooring and Tile	Must be single layer, fully adhered and in good condition. Do not install over heavy cushioned or cushioned backed flooring or tile installed below grade.	Must be single layer, fully adhered, and in good condition. Do not install over heavy cushioned or cushioned backed flooring, tile installed below grade or self adhering tile. Remove wax or polish and level embossed areas with an embossing leveler.
Ceramic, Marble and Granite	Tile must be well bonded. Grind high spots and fill low areas to a smooth surface with a latex modified portland cement underlayment.	

Subfloor Preparation

All subfloor surfaces must be clean, dry, smooth and free of movement. All surface imperfections should be leveled with a portland cement-based latex patching compound. Gypsum-based patching compounds are not recommended.

For details on suitable subfloors and preparation when directly adhering to the subfloor, refer to the Congoleum Professional Installation Guide at www.congoleum.com.

Congoleum Underflor

Underflor is the all-in-one underlayment system for floating installations of Endurance Plank and Tile.

Underflor provides an economical solution for installing Endurance as a floating flooring system over a variety of subfloor surfaces. Now, one underlayment covers it all; wood, concrete, most old hard surface flooring, gypsum topping, even old adhesive residue and painted surfaces.

Underflor is constructed in 6' wide rolls, and since it's a floating underlayment, it requires no fasteners or special tools so it's quick and easy to install.

Recommended Use

- Residential applications on all grade levels
- Interior use in dry, heated areas
- Do not install over ramps, in showers or other wet areas

GENERAL INFORMATION

- Always roll sheets of Underflor tightly around a tube with the vinyl side out for storing and transporting. Avoid distorting Underflor.
- Condition the room and all flooring materials at a constant temperature between 65°F (18°C) and 85°F (29°C) for 48 hours prior to, during and 48 hours after installation.

- All Underflor underlayment and finished flooring must be installed with a 1/4" space around the perimeter of the room to allow for expansion and contraction of the flooring system and subfloor. Under cut door casing and slide finished flooring under for a finished appearance.
- Use AD-32 Adhesive for installing Endurance over Underflor. Hard setting adhesives should never be used with Underflor.

Underflor Installation

Install Underflor with the vinyl side down just prior to installation of finished flooring.

Always install Underflor running perpendicular to the long dimension of the plank flooring (Fig. 1). Install planks with staggered end joints positioned at least 2" away from the seams in the underlayment.

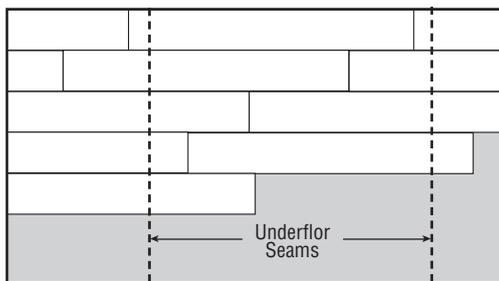


Figure 1: Install Underflor with seams perpendicular to the long dimension of the plank flooring with staggered end joints at least 2" away from seams.

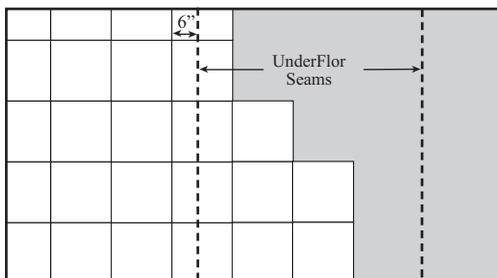


Figure 2: Position seams so they are at least 6" away from the tile joints.

Thoroughly sweep the floor to remove all loose dirt and debris.

Unroll the first sheet and trim it to fit allowing a 1/4" space between the edge of the sheet and the wall.

Unroll the second sheet and position it with the seam edge butted lightly up to the first sheet.

Tape the sheets together with 2" wide clear packing tape or other thin single face plastic tape available through office supply stores and most home centers. Apply the tape, centered directly over the top of the seam edges. Roll the tape with a steel seam roller.

Suitable Packaging Tapes Include:

- Scotch 3850 Packing Tape

- Duck™ Tape Standard Packaging Tape
- Shurtape® HP Series

Do not use masking tape, fiber reinforced tape, duct tape or other thick tapes that might telegraph through the finished flooring.

Install finished flooring immediately after installing Underflor to prevent contamination that could affect the adhesive bond.

PLANK INSTALLATION

First determine the direction to install the planks.

As a general rule, they are normally installed running in the long direction of the main room(s).

Place a mark in the center of the floor at each end of the room. Snap a chalk line between the marks (Figure 3).

To avoid small narrow planks along the side walls, divide the distance from the center line to the wall by the plank width (4" or 6"). If the remainder is less than half a plank width, adjust the center line one half the width of a plank in either direction (Figure 4). This will provide a balanced layout with larger cut pieces at the wall.

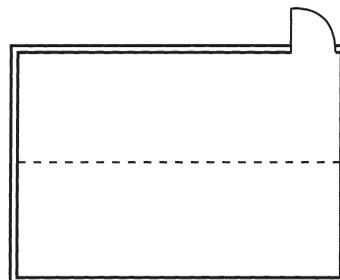


Figure 3: Center line

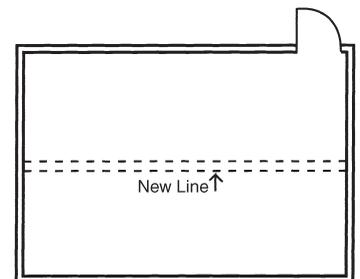


Figure 4: Adjust center line

Spread adhesive with a 1/16"x 1/32" x 1/32" trowel over one-half the floor up to the final center line. Do not apply excess adhesive. Allow adhesive to dry completely to a tack, normally 45 to 60 minutes, before installing plank. Adhesive will turn from off white to clear when ready.

Start installing the plank along the center line (Figure 5). Complete each row, including cut pieces at the wall before proceeding to the next row. Offset cross joints by at least 6" and position planks in a random fashion for the best appearance. Position each plank, tightly against the previous one, by pressing it firmly into place without sliding it. Remember to offset end joints randomly in each row, avoid small pieces less than 6" at the border, and be sure to place cut ends toward the wall.

Complete the opposite side of the room following the same procedure and then roll the entire floor with a 100 pound three-section roller in both directions.

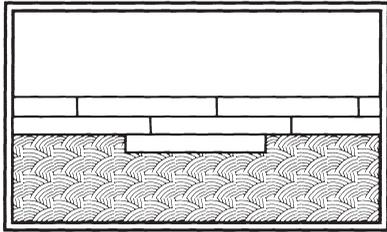


Figure 5

TILE INSTALLATION

Place a mark in the center of the floor at each end of the room. Snap a chalk line between the marks. Find the center of the line and snap a second chalk line at a right angle (Figure 6).

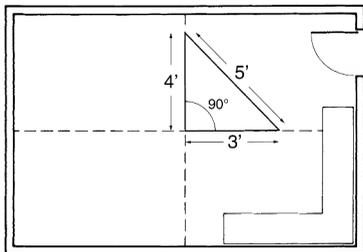


Figure 6: Use the 3' x 4' x 5' method to form a right angle.

Make a dry layout in one quadrant along the center and perpendicular chalk lines. Measure the distance between the last whole tile and the wall. If the distance is less than half a tile, snap a new chalk line one-half the dimension of a full tile away from the original chalk line (Figure 7).

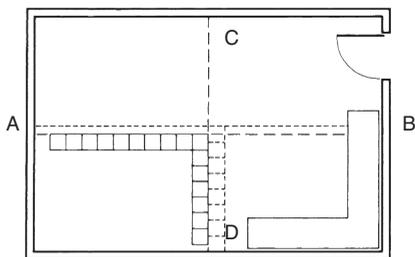


Figure 7: Adjust layout at center lines for larger border tiles.

Spread adhesive with a 1/16" x 1/32" x 1/32" trowel over one-half the floor up to the final center line. Do not apply excess adhesive. Allow adhesive to dry completely to a tack before installing tiles, normally 45 to 60 minutes. Adhesive will turn from off white to clear when ready.

Tiles should be laid starting at the intersection of the center lines and working out toward the walls. Press the tile firmly into the adhesive without sliding it. Position each tile tightly against the previously laid tiles with corners lined up. After completing the first half of the room, repeat these steps to complete the opposite side of the room and then roll the entire floor with a 100 pound three-section roller in both directions.

CUTTING PLANK AND TILE TO FIT

Endurance Plank and Tile can be cut with a sharp knife or a tile cutter. Mark the tile or plank with a pencil where it is to be cut and place it on a cutting board. Using a carpenter square as a guide, score the pencil line carefully with a sharp knife. Break or cut plank along the score mark.

Note: When installing Endurance over Underflor, always cut the plank/tile allowing a 1/8" to 1/4" space around the entire perimeter.

CAUTION: Keep fingers away from knife blade to avoid injury. Install the plank with the cut edge against the wall.

IRREGULAR CUTS

Scribe plank to fit to irregular shapes such as door trim, pipes, etc. Cut with a utility knife.

IMMEDIATELY AFTER INSTALLATION

Replace the base moldings and return appliances and furniture to the room by rolling or sliding them over strips of hardboard.

When installing over Underflor, all finish trim and transition moldings must be installed so they do not bind or restrict the finished flooring from moving when expansion and contraction occurs during seasonal changes. Fasten the trim to the wall not to the subfloor. Do not drive fasteners into the floor or underlayment.

Seal all areas that may be exposed to surface spills, i.e. tubs, toilet and showers with a silicone caulking. Restrict to light traffic for the first 24 hours.

ENDURANCE REPAIRS:

Repairs are very simple. To replace a damaged piece of flooring follow the below procedures:

- Warm the plank/tile with a heat gun.
- Using a sharp utility knife cut through a corner of the damaged plank/tile taking care not to cut into the subfloor below.
- Lift the end of the plank/tile and continue heating.
- As you provide sufficient heat, the plank/tile will release from the adhesive.
- Lift out the entire piece and warm the exposed adhesive.
- Install the new plank/tile roll with a hand roller to seal all edges.
- The repair is complete.

Congoleum

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