



Read this guide before starting installation

Cascades Laminate is a waterproof floor but should not be used to seal an existing floor from moisture. It cannot inhibit mold growth or prevent structural problems associated with or caused by flooding, excessive moisture, alkalis in the subfloor, or conditions arising from hydrostatic pressure. Regardless of location, always remove standing water and other liquids promptly. Moisture issues should be addressed and corrected at the job site before installation.

PRE-LAY CHECK

The installer is responsible for verifying that the product, color, pattern, and quantity are correct. Before installation, check each board for visual defects. Claims for flooring cut to size and/or installed will not be accepted. LW cannot accept responsibility for flooring installed with visible defects. Color variations are to be expected. For the best visual effect, shuffle planks from several cartons during installation.

SITE CONDITIONS

The floor covering should be stored and installed in a climate-controlled location with a temperature between 65° - 85°F (-18° - 29°C) or an average temperature of 70°F (21.1° C). If the product is stored in temperatures outside this range before installation. It is recommended that unopened packaging be acclimated at the *normal room temperature in the middle of the room where the floor will be installed for 48 hours before installation. The post-installation temperature range is between 32° - 98°F (0°-37°C). **Normal conditions mean a difference of no more than 25°F and 20% relative humidity between the stocking/transportation environment of the flooring and the final installation environment of the flooring.*

Acclimate for 48 hours. For acclimation, unopened cartons of flooring need to be lying horizontally in the room when acclimating. They do not need to be opened or the plastic to be removed. They need to lay (can be stacked) horizontally for 48 hours in a controlled environment. Humidity is maintained at or near normal living conditions, generally between 60° to 80° Fahrenheit and at the average yearly relative humidity for the area.

SUBFLOOR PREPARATION

Before installing any flooring, the installer must ensure that the job site and subfloor meet the requirements of this instruction. As a floating floor, the floor can be installed over existing hard surface floor coverings, provided that the existing floor surface is clean, flat, dry, and structurally sound. No loose grout, tiles, or planks. Tile Grout maximum depth <5/64" (<2 mm) below the tile surface. Moisture issues should be addressed and corrected at the job site before installation. Do NOT install over existing timber strip floors directly adhered to concrete or installed directly over timber bearers & joists. Installation is NOT allowed over any type of carpet.

The subfloor should be flat within 1/8" in a 6-foot radius or 3/16" within a 10-foot radius. The substrate should not slope more than 1" per 6 feet in any direction.

**UNDERLayment

The product has an attached pad, and using an additional underlayment that is more than 2mm thick will void the warranty. It is not approved. If you choose to use an additional underlayment, we recommend 1-2mm thick. Make sure to use an underlayment that is approved for use with floating laminate floor planks and has a manufacturer's warranty regarding floating laminate floor usage.

CAUTION: Some types of nails, such as common steel nails, may cause the laminate floor covering to discolor. Solvent-based construction adhesives are known to stain laminate floor coverings. LW Flooring is not responsible for discoloration problems caused by using the above-mentioned products.

Wood Subfloors

Do not install material over wood subfloors that lay directly on concrete or over-dimensional lumber or plywood used over concrete. LW recommends checking wood substrates for moisture. Obvious signs of moisture issues include warping, peaking, degradation of substrate integrity, rusted fasteners, and rusted floor registers. Even if obvious signs are not present, the material should be tested using an invasive moisture meter, and moisture levels should not exceed 14%.

1. Do not apply sheet plastic over wood subfloors.
2. Basements and crawl spaces must be dry. The use of a 6 mil black polyethylene is required to cover 100% of the crawl space on earth. Crawl space clearance from ground to underside of the joist is to be no less than 18," and perimeter vent spacing should equal 1.5% of the total square footage of the crawl space area to provide cross ventilation. Where necessary, local regulations prevail.

Concrete Subfloors

LW recommends testing concrete substrates for relative humidity, moisture, and pH before installing LW Cascades. Test results should not exceed 85% relative humidity (RH). The Calcium Chloride Test for the moisture should be no more than 8 lbs per 1000 SF in 24 hours MVER (Moisture Vapor Emission Rating), and pH tests for alkalinity levels should register between 6 and 9. **LW Flooring requires a 6 mil poly film when installing over concrete subfloors.**

Radiant Heat

Hydronic In-slab only must be cast $\frac{1}{2}$ " below the surface of the concrete slab and should be operating at least 2 weeks before installing LW Cascades. Set the temperature of the radiant heating system to 65°F 72 hours before, during, and 72 hours after installation. The temperature of the radiant heat floor may be increased gradually 72 hours after installation, in increments of 5°F, but the surface temperature should never exceed 85°F. Contact the manufacturer of your radiant heating system for further recommendations.

Note: Follow and comply with various federal, state, and local government agencies regulations governing the removal of asbestos-containing material in place. If you contemplate 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. Unless positively certain that the product is a non-asbestos-containing material, you must presume it contains asbestos.

INSTALLATION PROCEDURES

LW Cascades flooring is designed to be installed utilizing the floating method. Never secure the planks to the subfloor when using the floating installation method. Do NOT install cabinets or fixed objects on top of the flooring. Proper expansion space ($\frac{3}{8}$ - $\frac{1}{2}$ "), 10-12 mm, is required. Undercut all doorjambs. Do not fasten wall moldings and or transition strips to the planks. Installation exceeding 33 feet in length and installation exceeding 33 feet in width require expansion trim.

LW Cascades is designed to be installed utilizing the floating method on Plywood, OSB, Particleboard (PB), and Masonite on, above, and below grade. Do NOT adhere tape to the face of the floor, as it will damage the finish. No claims will be processed for tape damage.

Note: Cascades can be installed using angle-in and flat installation methods.

Method A: Angle-in installation method

1. Position the plank to be installed at an angle of 20 to 30° to the plank already installed.
2. Move the plank gently up and down and, at the same time, exert forward pressure.
3. The planks will automatically click into place.
4. Insert the tongue or the groove into the tongue. This method is the most common and easiest way.

Method B: Flat installation method

1. You can also tap the planks into each other without lifting them.
2. For this method, you will need a tapping block.
3. The planks should not be joined with a single tap, and the tapping block should sit flat on the floor.
4. To avoid damaging the planks, you must tap them together gradually.
5. Use this method only in cases where you are unable to use the Angle-In method.
6. The rest of your floor should be installed using the angle-in method.

TOOLS FOR INSTALLING THE FLOOR

For best results, you must follow the installation instructions exactly. Besides the regular tools for installing laminate floors (i.e., hammer, saw, pencil, measure), you will also need the following accessories:

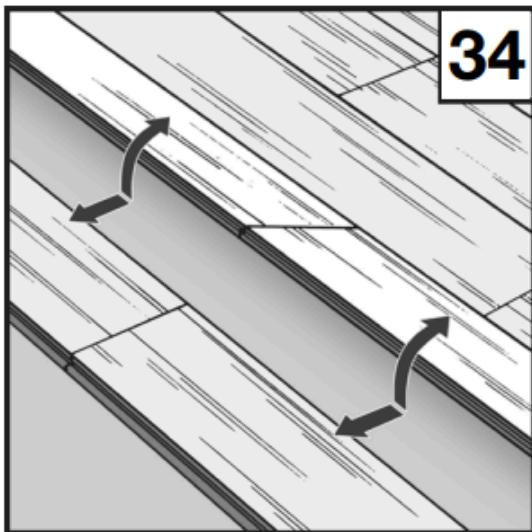
- Tapping Block
- Maintenance products
- Underlayment system **
- You may also need to saw the planks. To obtain a clean cut, the pattern side should face down when you use a jigsaw, sabre saw, or circular handsaw and up when you use a handsaw, table saw, or crosscut saw.

1. Plan the direction of the area to be installed to maximize the visual appearance once installed. Confirm the direction of the plank grain and balance the installation from the center of the area. Proper planning and layout will prevent narrow plank widths at wall junctures or very short-length pieces at the end of rows. The floor should preferably be installed parallel to how the light enters the room.
2. Use spacers along the walls to maintain proper expansion space ($\frac{3}{8}$ - $\frac{1}{2}$ ") and align the first plank. Determine if the starter row will need to be cut. If the first row of planks does not need to be trimmed in width, cutting off the unsupported tongue will be necessary so that a clean, solid edge shows towards the wall.
3. Install the second piece in the first row by angling the end tongue into the end groove of the first plank. Be careful not to bend the corner of the plank. Maintain an expansion gap of $\frac{5}{16}$ " (6-8mm) from the wall.
4. Start the second row by cutting a plank to the desired length. Keep in mind that the plank must not be shorter than 6" (15cm) to achieve the best appearance. Position the plank to be installed at an angle of 20 to 30° to the plank already installed. Move the plank gently up and down and, at the same time, exert forward pressure. The planks will automatically click into place. You can insert the tongue into the groove or the groove into the tongue. The tongue-in-groove method is the most common and easiest way.
5. Install the second plank in the second row by inserting the short-end tongue into the previously installed plank groove. Align the plank so that the long side tongue tip is positioned just over the groove lip of the plank in the first row. Working from the end seam at a low angle, insert the long tongue into the groove of the adjoining plank. Very little force is required to seat the tongue into the groove. You should feel the tongue lock into the groove.
6. Work across the room's length, installing planks along the wall in the first row and then aligning the planks in the second row. Keeping these two rows straight and square is critical, as they are the "foundation" for the rest of the installation. Cut the last plank in the first row and leave an expansion gap of $\frac{5}{16}$ " (6-8mm). The leftover of this plank may be used to start the third row if it's a minimum of 6" (15cm) long. Check often for squareness and straightness while installing the floor, as failure to do so can result in gapping.
7. Continue installing planks and ensure a random appearance with end pieces at least 6" (15cm) long. Check that all planks are fully engaged; if a slight gap is found, tap the gap together using a tapping block and a scrap of flooring to cover the tapping block to avoid damaging the planks. Do NOT tap directly on the seam.
8. When fitting under door skirting, if necessary, a flat pull bar may be used to assist in locking the planks.
9. When fitting around obstacles or into irregular spaces, planks can be cut easily and cleanly using a saw. It is often beneficial to make a cardboard template of the area and transfer this pattern to the plank.
10. Install wall and door moldings last. Protect all exposed edges of the flooring by installing wall molding and/or transition strips. Be sure that all moldings are fastened directly to the wall or subfloor. Do not place any fasteners through the floating flooring.
11. Caulk the perimeter of the floor with silicone suitable for wet areas, such as bathrooms or laundries.

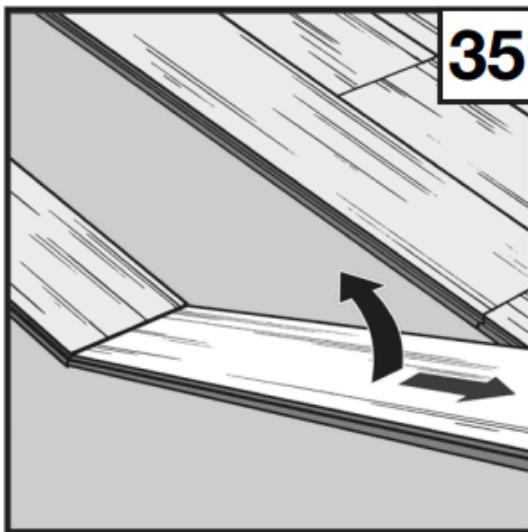
REPAIRS

LW Flooring Cascades plank flooring is tough and durable; however, if a plank becomes damaged, it can be replaced. Lifting or removing it is possible to replace or remove panels that have been laid as floating flooring in living areas and commercial areas without causing damage.

1. First, the whole row is released along the long side by angling it to free it from the locking mechanism [34].
2. Next, the panels, while lying flat on the floor on the head side, should be bent on the narrow side and released from the bonding [35].
3. Please be particularly diligent and careful when undertaking this work in order to avoid damaging the tongue-and-groove selections.



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GENERAL MAINTENANCE

Installation and maintenance guides may be revised periodically to apply to new products or reflect changes in industry standards. Please visit our website at www.lwflooring.com to review our most up-to-date documents.

- NEVER use wax or oil-based cleaning products. All-purpose cleaners are not recommended; they can dull your floor's finish or leave a hazy residue.
- LW Flooring recommends Bona brand laminate cleaning products, which are widely regarded as the best cleaning solution for urethane finish flooring.
- Sweep, vacuum with the beater bar up (no beater bar), or dust mop regularly.
- You can steam mop or light/damp mop.
- Wipe up spills immediately. Never let water stand on the wood floor for any length of time.
- Use walk-off mats at entrance doors and in front of kitchen sinks.
- Install proper felt protectors under the chair and furniture legs to prevent scratching.
- Roller or castor chairs should not be used directly on the floor surface as grit will build up under the wheels over time and become abrasive. Protective mats must be placed on the floor to protect the surface coating and to keep your floor looking good.
- Do not drag or push heavy items across the surface of the floor.
- Close curtains or blinds to limit direct sun exposure, which can cause discoloration and thermal expansion.