

SMARTPLANK

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GLUE-DOWN APPLICATIONS **INSTALLATION INSTRUCTIONS**

All SmartPlank floors have features that minimize waste of material and time. Longer than average board lengths- up to 8' long, coupled with our precision sanding process during manufacturing, result in significantly less waste of material and time when compared to many other competitors. For optimal results, SmartPlank recommends installation is performed by an National Wood Flooring Association certified installer.

SITE CONDITIONS: Wood is hygroscopic and will absorb or expel moisture based on environmental conditions. Gain and loss of moisture corresponds with an increase or decrease in size and occasional warping. Our flooring is 100% hardwood and is more dimensionally stable due to the multi-ply construction but not immune to these dimensional changes. For the best results it is recommended that SmartPlank Floors are stored in the **controlled environment** in which it will be installed for **5-7 days** prior to installation.

- The building should be closed in with all outside doors and windows in place. The wall coverings should be in place and the painting completed, except the final coat on the base molding. If possible, delay installation of base molding until flooring installation is complete. All concrete, masonry, framing members, drywall, paint, and other “wet” work should be thoroughly dry. Basements and crawl spaces must be dry and well ventilated.
- Exterior grading should be complete. To direct flow away from the structure grading should offer a **minimum drop of 3” in 10’**. Do not obstruct the drainage with landscaping materials. All gutters and downspouts should be in place.
- Crawl spaces must be a **minimum of 18”** (46 cm) from the ground to underside of joists. A ground cover of **6-20 mil** black polyethylene film should be installed as a vapor barrier with joints lapped and sealed with moisture resistant tape. The crawl space should have perimeter-venting equal to a minimum of 1.5% of the crawl space square footage. These vents should be properly located to foster cross ventilation. **NOTE:** Unvented crawl spaces are acceptable when following qualified local regulations.
- SmartPlank may be installed below, on ,or above grade level. Our products are not recommended for applications in areas where excessive humidity is present such as full baths, hot tub enclosures, or wine cellars. Permanent air conditioning and heating systems should be in place and operational. The installation site should have a consistent room temperature of **60-80°F** (16-27°C) and humidity of **30-55% for 14 days** prior, during, and after installation.
- **Radiant Heat Applications** must meet or exceed all of the requirements for site conditions and:
 - Before installation:
The heating system should be run at **2/3 of maximum output for a minimum of 2 weeks** to allow any remaining moisture to evaporate, allowing to attain its final moisture content without causing damage. Three or four days before installation, the heating system must be reduced to a suitable temperature (about 18°C/64°F).
 - After Installation:
Approximately 2 days after installation is complete, gradually (over a period of 1 week) raise the temperature of the heating system to its desired operating level.
 - Life Cycle:
Surface Temperature of flooring should **never exceed 81°F(27°C)**. **Exceeding this temperature will void any related warranty by the flooring manufacturer.** Most under-floor heating systems

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DO NOT have a humidification system. Add humidification as necessary to maintain humidity levels between **20-55% RH**.

SUB-FLOOR REQUIREMENTS:

The following minimum standards must be met **before** beginning the application of any SmartPlank products. The sub-floor must meet the following minimum requirements. See additional requirements specific to the installation method.

- **LEVEL/FLAT** - within **3/16" in 10'** (5 mm in 3 m) and/or **1/8" in 6'** (3 mm in 2m).
- **CLEAN** – Free of debris, loose materials or materials that may release with age such as paint and dry wall materials.
- **DRY** - Check and document moisture content of the sub-floor using the appropriate moisture test. If the sub-floor has excessive moisture apply a suitable moisture mitigating product that is compatible with the adhesive being used. Contact the adhesive supplier for their recommendation and warranty

Wood Subfloor - Wood sub-floors must **not exceed 12% RH** and there must be **no more than 4% difference** between the floor and the wood subflooring material.

Concrete Subfloor – Concrete sub-floors must be a minimum of **30 days old** before testing begins. Concrete must **not exceed 4.5** using a Tramex Moisture Encounter meter. Calcium Chloride test results should **not exceed 3# 24hr/1000 ft²**. In-situ probes must **not exceed 75% RH**.



- **STRUCTURALLY SOUND** – The attachment methods used for the installation of SmartPlank floors **ARE NOT designed to stiffen existing sub-floors**. If the sub-floor has excessive deflection before installation of the flooring it is unlikely to improve with the addition of SmartPlank. Excessive deflection may cause premature finish wear and the floor to become noisy with age.

Wood sub-floors: Wood panels should have an adequate fastening pattern, glued and /screwed or nailed as system requires using the acceptable fastener and pattern.

- Typical: **6"(15 cm) along bearing edges and 12"(31 cm) along intermediate supports**. Flatten any swollen or raised edges as necessary by sanding or scraping.
- Nail or screw any areas that are loose or squeak. Replace any water damaged swollen or delaminated sub-flooring or underlayment.
- Best results occur when the sub-floor has a **minimum thickness of 3/4"**.

Concrete sub-floors: Wood flooring cannot be mechanically fastened directly to concrete.

- Remove all loose or broken concrete and fill/flatten as necessary using cementitious leveling materials of **3,000 PSI or more**.
- When installing over concrete, use an adhesive with moisture barrier, or moisture mitigating underlayment.

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GENERAL NOTES:

Inspect all materials carefully before installation. Warranties do not cover materials with visible defects once they are installed. It is the responsibility of the installer/owner to determine if the jobsite conditions are environmentally acceptable and that the sub-floor system is acceptable for the installation of wood flooring. SmartPlank declines any responsibility for wood floor failures or problems associated with or resulting from sub-floor/sub-surface structural or environmental deficiencies or jobsite damage after the hardwood flooring has been installed.

The following instructions comply with all recommendations as outlined in *Installation Guidelines and Methods* published by the National Wood Flooring Association (NWFA). For questions regarding additional application information contact NWFA at www.NWFA.org.

CAUTION: WOOD DUST

Sawing, sanding and machining wood products can produce wood dust. Airborne wood dust can cause respiratory, eye and skin irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans.

Precautionary Measures: If power tools are used, they should be equipped with a dust collector. If high dust levels are encountered, use an appropriate NIOSH designated dust mask. Avoid dust contact with eye and skin.

First Aid Measures in Case of Irritation: Flush eyes or skin with water for at least 15 minutes

!WARNING!

EXISTING IN-PLACE RESILIENT FLOOR COVERING AND ASPHALTIC ADHESIVES. DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEADBLAST, OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVE, OR OTHER ADHESIVE. These existing in-place products may contain **asbestos fibers** and/or **crystalline silica**. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the existing in-place product is a non-asbestos-containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern removal and disposal of material. See current edition of the Resilient Floor Covering Institute (RFCI) publication Recommended Work Practices for Removal of Resilient Floor Coverings. **SmartPlank Flooring does NOT contain asbestos.**

TOOLS & ACCESSORIES NEEDED:

- Safety glasses
- NIOSH-designated dust mask
- Broom
- Utility knife
- Pencil
- Tape measure
- Carpenter square
- Wood filler
- Moisture meter (wood, concrete or both)
- Hammer or rubber mallet
- Hand saw, table saw, circular saw, or band saw
- Moisture mitigating product (if necessary)**
- Premium wood flooring adhesive* w/recommended trowel
- Moldings as needed

****NOTE:** If concrete moisture is higher than the specification listed in the Site Preparations before Installation section, please contact us for further guidance: www.smart-plank.com

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SmartPlank recommends the following Adhesives or equivalent:

Manufacturer / Product	Trowel
Bona R851 Wood Floor Adhesive Moisture Controlling Silane-based	1/4" x 1/4" x 7/16" V-notch Bona 1250G trowel
Bostik's Best Urethane Wood Flooring Urethane Adhesive (adhesive only method , flooring ≤ 1/2" thick)	3/16" x 5/32" V-notch
Bostik's Best Urethane Wood Flooring Urethane Adhesive (adhesive only method , flooring > 1/2" thick)	1/4" x 1/4" x 1/8" Square notch
Fontane LD Polyurethane Wood Floor Adhesive	3/16" x 3/16" x 3/16" Square notch
Titebond 771-Step Adhesive, Moisture & Sound Control (adhesive only method)	3/16" x 1/4" x 11/16" Center-on-center, V-notch
Titebond 811 Advantage Wood Flooring Adhesive	3/16" x 1/4" x 1/2" Center-on-center, V-notch

Our flooring can be installed over most structurally sound sub-floors or existing flooring materials. Wood, concrete, sheet vinyl, vinyl tile, ceramic, are all acceptable sub-floors provided they meet the standards outlined in the instructions for site preparation before installation notes. The glue-down method is best suited for installations on concrete.

PREPARATION AND LAYOUT:

- Inspect all door casings and wall molding. Where necessary cut the moldings to allow the wood flooring to slide beneath them. This can be done with a jamb saw or by placing a piece of flooring (face down) next to the molding. Using a carpenter's saw, lay flat on the flooring then saw through the casing. Remove the waste material and sweep away all debris.
- Plan the layout for the best visual appearance of the finished wood floor. Measurements must be made to allow for the width of the flooring plus **1/2" expansion space** and must allow for the width of the tongue.
- Place a mark approximately 18" from the corners of the starting walls and the width of the Smartplank Flooring plus 5/8" to allow for expansion and the tongue. **Example:** When installing 3" SmartPlank Flooring place the mark approximately 18" from each end wall and 3-5/8" from the starting wall. Strike a chalk line through these two points the length of the room to the end walls. This line is the **WORKING LINE**.

INSTALLATION:

- Measure the distance between the **WORKING LINE** and the wall the full length of the starting wall. If the wall is badly out of line (crooked) it may be necessary to rip boards to follow the irregularity in the wall.
- Using no adhesive install a sacrificial row on the **INSIDE** edge (closest to the wall) of the chalk line. This row may be of any straight wood material or the narrowest width of board. The floor should be installed with the groove side facing the line (tongue towards wall).
- Make certain each of the sacrificial boards is in perfect alignment with the **WORKING LINE**. When satisfied, **attach the board to the sub-floor using finish nails or concrete nails**. This sacrificial row is to minimize movement of the flooring during installation and will be removed once the floor is complete.
- Read the label on the adhesive container. Using the trowel recommended by the adhesive supplier spread an area that can be covered with wood within the working time of the adhesive (as noted on pail), generally **30-45 minutes**. An average spread is an area **14-25" deep and the length of the room**.

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- Install the first board making certain that the TONGUE side is tight against the sacrificial board. Installation can be from the left or right. Best speed is usually accomplished by installing from the left if right-handed and from right if left-handed.
- Insert the end of the next board into the adjoining tongue or groove and force the board tightly against the sacrificial board and the end of the adjoining first board.
- After three or more boards have been installed in the first row, installation of the second row can begin.
- Select a board for the second row that will allow **at least 6" of difference** between it and the length of the board in the first row. Continue installing in this manner until three or more boards have been installed.
- Continue adding rows, extending each as necessary until all of the adhesive has been covered. **Avoid close alignment of end joints in an "H" or "Stair-step" pattern.** Stagger end joints a **minimum of 6"**, or twice the flooring width for wider widths.
- Cut to length a board that fits at the end of each row always allowing for **1/2" expansion space** at the wall.

TIP: Do not cut short boards to finish a row. The leftover materials will be used for future starter boards. Short lengths cannot be used and will become waste.

- Once the first section has been completed inspect it closely, tighten all end and side gaps. Clean all adhesive from the surface, immediately. **DO NOT wait to clean the surface** until completion of the job, the adhesive may not be removable. If necessary, **use blue painter's tape** to hold the joints tightly together until the adhesive cures. **DO NOT use masking tape** as the adhesive residue may affect the factory finish or bond of the finish if the materials are unfinished.
- Spread a new working area and proceed as above. Use the cut ends of the boards from the previous section as starter boards when possible. **Avoid lengths shorter than 4"** as they are hard to keep in alignment and are easily displaced. Continue in this manner until all rows are complete.
- Measure the final row. Rip the boards (parallel cut) to fit the final wall allowing for **1/2" expansion space**. Use blue painter's tape to hold the final row in place.
- Remove the sacrificial row being careful to not damage the adjoining boards. If **1/2" expansion space** is not available because of a bow in the wall rip the boards to allow the required spacing. Apply adhesive to the back of each board and gently press in place. Pull the boards tightly to the previously installed row and hold in place with blue painter's tape.

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COMPLETING THE JOB:

- Remove all tape from the floor starting from the area in which the wood was first applied. Inspect for gaps, chips and adhesive residue while removing the tape. Remove all adhesive residue, touch up chipped areas and fill with the appropriate filler as necessary. Use colored latex filler for factory finished products and a stainable filler if the floor is to be sanded and finished.
- Install/reinstall all moldings and clean the floor with the appropriate cleaner. Use a premium quality cleaner for urethane wood floors if the product is factory finished or the compatible cleaner (if required) if the floor is to be sanded and/or finished.
- **If required by the adhesive manufacturer** roll the floor with the appropriate weight roller.
- First use of the floor varies from one adhesive manufacturer to another. Generally, the floor can **have light foot traffic** after the adhesive has **cured for 18-24 hours** with furniture being LIFTED into place after 24 hours.
- If the flooring is UNFINISHED adequate curing time **MUST** be allowed prior to finishing of the floor. If the adhesive used was **water based it is best to wait 5 days** to allow all residual moisture to dissipate and the adhesive to fully cure. If the adhesive is a **urethane or solvent based adhesive 72 hours** is usually an adequate amount of time to achieve full-cure.
- **DO NOT** attempt to finish the floor before the adhesive has had an adequate period-of-time to cure and dissipate all solvents or moisture as this will affect the final appearance and performance of the finish and floor.

MOLDING TYPES AND USE:

- Reducer Strip: a wedge shaped molding. Used as a transition to thinner floor covering materials. Generally overlaps edges.
- Baby threshold: a molding undercut to transition to thicker materials or for use against vertical objects where expansion is required. Use against sliding door tracks, fireplaces, carpet, ceramic tile, existing thresholds or floor to ceiling glass. Overlaps edges
- Stair Nosing: a molding undercut for use as a stair landings trim, elevated floor perimeters, and stair steps.
- Quarter Round: a molding used to cover expansion space next to baseboards.
- T-Molding: a molding used as a transition piece from one flooring to another of similar height. Overlaps edges.