Glue Down Luxury Vinyl Plank Installation Instructions

GENERAL

These instructions cover all fully adhered installations of American Flooring Distributor (AFD)'s Luxury Vinyl Plank (LVP). All recommendations are based on the most recent available information. The information on these sheets provides general guidelines. These instructions and recommendations must be followed for a satisfactory installation.

The installation of AFD's LVP is straightforward and similar to the installation procedures that apply to all quality resilient flooring. Good preparations are essential for a trouble-free installation. Do not install LVP until jobsite testing and subfloor preparations are finished and the work of all the other trades are completed. Site conditions must comply with the relevant building codes and local, state, and national regulations.

*LVP is recommended for use over properly prepared concrete, suspended wood, metal, and other suitable substrates.

*LVP is not suitable for external installation or unheated locations.

*LVP, adhesive, jobsite, and subfloor must be acclimated to a stable condition before installation (see job site testing).

*Following Installation, LVP foot traffic should be minimized for 24 hours; point loads and rolling traffic for 48 hours and should utilize minimal wet cleaning for 5 days.

*LVP flooring should remain at a temperature between 55°- 85°F (13°-29°C) during its service life.

*Adhesive types can have a significantly different moisture tolerance which can influence required subfloor prep as well as the installation time.

MATERIAL, RECEIVING, HANDLING & STORAGE

1. All floor covering products require care during storage and handling. It is important to store flooring products in a dry, temperature-controlled interior area.
2. The temperature range should be between 60° F and 90° F, and the relative humidity should be controlled and maintained between 30% and 70%.
3. Material must be acclimated for at least 48 hours before beginning the installation.
4. Flooring materials that are shipped in cartons must be stored properly. Cartons must be kept squarely positioned on the pallet to prevent distortion of the contents and to be fully supported. Do not store close to exterior walls, in direct sunlight or near HVAC vents.

5. Stored cartons are to be protected from forklift and other traffic that can damage carton corners.
6. Immediately remove all shrink wrapping before acclimation and verify materials delivered are correct style, color, and quantity.
7. Report discrepancies immediately to American Flooring Distributor. Claims for installation of products installed with visual defects, mix production runs, or incorrect style will not be honored.

JOBSITE TESTING

1. Before job-site testing, the building envelope must be completed and sealed.
2. The installation area and materials to be installed shall be maintained at a minimum of 60°F(15.6°C) and a maximum of 90°F (32.2°C) for 48 hours before, during and for 48 hours after completion of installation. Relative humidity level extremes must also be avoided. The recommended humidity control level is 30-70%. If a system other than the permanent HVAC source is utilized, it must provide proper control of both temperature and humidity to the recommended or specific levels for the appropriate time duration.
3. Test sites must be properly prepared and protected for the duration of testing to achieve valid results.
4. **Surface Flatness for all Subfloors: the surface shall be flat to 1/8" (3.2mm) in 10 ft (3050 mm) and 1/32" (0.8 mm) in 1 ft (305mm)** to check flatness, place a 10 ft straight edge, string, laser leveler or use another suitable method on the surface and measure the gap.
5. **Concrete subfloors:**
    - **a.** Concrete subfloors must be finished and cured, free of all sealers, coating finishes, dirt, film forming curing compounds, or other substances that may prevent proper bonding of the flooring materials (ACI 302.1 and ATSM F710).
    - **b.** Randomly check the concrete subfloor for porosity using the drop water test. Place a 1-inch diameter drop of water directly onto the concrete subfloor. If the water droplet does not dissipate within 60 to 90 seconds, the subfloor is considered non-porous.
    - **c.** Concrete subfloors must have a minimum compressive strength of 3000 psi. Concrete subfloors shall not consist of lightweight concrete or gypsum.
    - **d.** Moisture testing: Perform either the preferred In-situ Relative Humidity (RH) Test (ATSM F2170) or the acceptable Moisture Vapor Emission Rate (MVER) test (ATSM F1869). For acceptable moisture limits please refer to the specifications of the adhesive of choice.
    - **e.** Alkalinity: must test surface alkalinity (ASTM F710). A 7.0 TO 9.0 pH is acceptable.

6. Wood subfloors and underlayment panels shall have the moisture content tested using a suitable wood pin meter. Reading between the wood subfloors and underlayment should be within 3% and have a maximum moisture content of 12% or less.

MOISTURE SUPPRESSANT SYSTEM

Concrete subfloors that exceed adhesive specifications will require a Moisture Suppressant System. Due to complexities associated with the moisture vapor transmission, emissions and movement of soluble salts (alkalinity) in concrete subfloors, we do not offer, recommend, or warranty a specific solution for excess moisture in concrete slabs.

SUBFLOOR PREPARATION

Concrete

Careful subfloor preparation is vital for an excellent floor appearance and good plank adhesion. The subfloor must be smooth, firm, flat, clean, dry, free from defects and fit for purpose. A suitable smoothing compound should be used to ensure that that no irregularities show through to the surface of the finished floor. In all cases, the subfloor must meet the moisture and pH requirements before installation.

Below and On-grade concrete subfloors must have a suitable vapor retarder properly installed directly beneath the slab. Always follow manufacturers' written recommendations for the use of their appropriate surface preparation materials.

1. Record and file site conditions, test results and any corrective action(s) taken. It is important to maintain this documentation throughout the warranty period.
2. The subfloor must be clean (free of dirt, sealers, curing, hardening or parting compounds or any substance that may stain or prevent adhesive), smooth, flat, sound, fit for purpose, free of movement, excessive moisture and high alkalinity.
3. Slick Surfaces such as power troweled concrete shall be abraded or profiled to allow for a mechanical bond between the adhesive and subfloor.
4. Remove existing resilient floor covering; remove all residual adhesive, paint or other contaminants following RFCI recommended work practice. The use of adhesive removers or solvents in the abatement or removal of existing or old adhesives is prohibited and may avoid any warranty.

WARNING: ASBESTOS & SILICA- refer to the Current Resilient Floor Covering Institute (RFCI) document. "Recommended Work Practice for Removal of Existing Resilient Floor Covering" for guidance. (www.RFCI.com).

5. Perform corrective actions necessary for elevated moisture or high alkalinity conditions.
6. Surface flatness for all subfloors: the surface shall be flat to 1/8(3.2mm) in 10 ft (3050mm) and 1/32" (0.8mm) in 1 ft (305mm). Bring high spots level by sanding, grinding etc. and fill low spots. Smooth surface to prevent any irregularities or roughness from telegraphing through the new flooring.
7. Leveling and Patching:
   a. For concrete subfloors, use only high-quality cement-based materials (minimum 3000 psi compressive strength according to ASTM C109). Mix with water only, do not use latex. Caution: Do not lightly skim coat highly polished or slick power troweled concrete surfaces. A thin film of floor patch will not bond to a stick subfloor and may become a bond breaker causing flooring to release at the interface of the subfloor and patching material. If in doubt, perform a bond test prior to commencing with the installation.

Wood

b. Wood subfloors require an underlayment (double layer construction) with a minimum total thickness of 1" (25mm). Use minimum ¼ (6 mm) thick APA rated "underlayment grade" plywood with a fully sanded face or other underlayment panel that is appropriate for the intended usage. Install and prepare panels and seams according to the manufacturers' instruction. Also refer to ASTM F 1482 Standard Practice for Installation and Preparation of Panel Underlayment to receive Resilient Flooring.
c. Many times, wood panel subfloors are damaged during the construction process or are not underlayment grade. These panels must be covered with an appropriate underlayment. Underlayment panels are intended to be used to provide a smooth surface on which to adhere the finished flooring covering. It should be understood that underlayment panels cannot correct structural deficiencies.
d. Panels intended to be used as underlayment should be specifically designed for this purpose. These panels should have a minimum thickness of ¼ (6mm), any panels selected as an underlayment must meet the following criteria:

*Be dimensionally stable.

*Have a smooth, fully sanded face so graining or texture will not telegraph through.

*Be resistant to both static and impact indentation.

*Be free of any surface components that may cause staining such as plastic fillers, marking inks, sealers, etc.

*Be of uniform density, porosity, and thickness.

*Have a written warranty for suitability and performance from the panel manufacturer or have a history of performance

SUBFLOOR PREPARATION

e. Any unevenness at the joints between panels must be sanded to a level surface. Gaps between panels, hammer indentations, and all other surface irregularities must be filled and sanded.

8. Particleboard, chipboard, construction grade plywood, any hardboard and flake-board, are not recommended as underlayment for fully adhered installations. All have inadequate uniformity, poor dimensional stability, and variable surface porosity. **In all cases, the underlayment manufacturer or underlayment installer is responsible for any / all underlayment warranties.**

INSTALLATION PROCEDURES

Before starting the Luxury Vinyl Plank installation, ensure the following are satisfactorily completed.

- Acclimation: The installation area and material to be installed shall be maintained at a minimum of 60°F (15.6°C) and a maximum of 90°F (32.2°C) for 48 hours before, during and 48 hours after completion of the installation. Relative humidity level extremes must also be avoided. General recommended humidity control level is 30 – 70%. If a system other than the permanent HVAC

source is utilized, it must provide proper control of both temperature and humidity to recommended or specific levels for the appropriate time duration.

- Flooring Material: Confirm the quantity of LVP and adhesive are sufficient for the area to be installed. Check plank for visual defects before installation. Installation of flooring acknowledge acceptance of materials. Report discrepancies immediately. Claims for installation of product installed with visual defects or incorrect style will not be honored.
- Expansion joints, isolation joints, or other moving joints are incorporated into concrete floor slabs to permit movement without causing random cracks in the concrete. These joints must be honored and not be filled with underlayment products or other materials, and floor coverings must not be laid over them. Expansion joint covering should be detailed by the architect or engineer based upon intended usage and aesthetic considerations.
- Surface cracks, grooves, depressions, control joints or other non-moving joints, and other irregularities shall be filled or smoothed with high quality cement-based patching or underlayment compound for filling or smoothing, or both. Patching or underlayment compound shall be moisture, mildew, an alkali-resistant, and shall provide a minimum of 3000 psi compressive strength after 28 days, when tested in accordance with ASTM C109 OR ASTM C472, whichever is appropriate.
- Subfloor Preparation: Make sure all surfaces to be covered are completely clean, dry, and smooth and that all necessary subfloor preparation has been properly completed and documented.
- Inspect substrate: perform final acceptance inspection of substrate.
- Adjacent Surfaces protection: protect adjacent work areas and finish surfaces from damage during product installation.
- Flooring protection: LVP should be the last material installed to prevent other trades from disrupting the installation and adhesive set up or damaging the floor.

Start of flooring installation indicates acceptance of current subfloor conditions and full responsibility for completed work. LVP comes in plank formats. Our LVP can be laid out to run either parallel or diagonal to the room or primary wall.

*****Plank flooring should have end joints offset by at least 6” and staggered to create a random appearance that avoids alignment of end joints. (all arrows pointing in the same direction)

The Following condition must be giving consideration when determining how the AFD’s LVP will be installed:

1. Layout: layout shall be specified by the end user, architect or designer.

a. Establish center marks and determine start point to balance installation in room and have equal plank widths on opposite side of the room. This can be facilitated by dry laying planks and marking base lines.

b. The room layout must be set up so all the flooring can be installed while staying off freshly installed planks. This will minimize planks shifting, adhesive displacement and wet adhesive from oozing up and getting onto the face of the planks. This can be accomplished by creating work zones outline with chalk lines to spread adhesive aligned with established base lines. Create

work zones that are no wider than the installers comfortable arm reach and in multiples of the plank width.

c. All installations: spread only the amount of adhesive that can be covered within the working time specific to the adhesive being used.

When all the preparatory work is satisfactorily completed, including dry fitting cut planks (if applicable), proceed with installation. Inspect each plank for visual defects before installing. **Installation of the flooring implies acceptance of materials.**

Adhesive: AFD recommends the use of a premium pressure sensitive vinyl adhesive designed for use on Luxury Vinyl Flooring. The following adhesives are suggested for the installation of AFD's LVP.

Mapei ECO 360 or Taylor Meta – Tec 2091

Note: Concrete subfloors that exceed 8 lbs MVER as determined by the Calcium Chloride

MVER test (ASTM F-1869) OR 95 % RH as determined by the In-Situ Relative Humidity Test (ASTM F-2170) should be considered excessive with regards to moisture emissions and may require the installation of a moisture suppressant membrane.

AFD will not assume responsibility for floor covering failure due to hydrostatic pressure or moisture vapor emission. The final responsibility for determining if the concrete is dry enough for installation of the flooring lies with the floor covering installer.

Caution: Temperature directly affects adhesive working and setting times. Warmer temperature shortens working times, and colder temperatures lengthen working times of adhesive. Follow instructions for proper application.

Adhesive Application: Follow the instructions on the adhesive labels.

a. Use a trowel with appropriate notch size. Do not use worn trowels.
b. Spread adhesive evenly with proper trowel held at 60-degree angle avoiding skips or voids and excessive adhesive application.
c. Only spread sufficient adhesive that can be covered within adhesive working time.
d. Plank must be placed into adhesive as specified (follow label directions)
e. Install rows to chalk line making sure planks are precisely aligned with chalk line and adjacent planks.
f. Randomly check planks for complete coverage of adhesive onto back of the plank especially near the end of each adhesive spread. If there is little or no adhesive transfer, or if the adhesive has flashed off or skinned over; adequate bonding may not be possible. Scrape the flashed off adhesive from the floor and spread the fresh adhesive.
g. If planks shift, use releasable masking tape diagonally over seams to keep planks tight and aligned.
h. Wet-set Application: Do not work on top of freshly installed flooring. This will minimize plank shifting, adhesive displacement, and prevent wet adhesive from oozing up and getting onto surface of the new flooring. If you must work on top of the newly installed flooring, use kneeling or walking boards.

i. The floor must be rolled in both directions using a 100 lbs 3-section roller. Roll floor as soon as conditions permit without the plank sliding or adhesive bleeding to the surface. Roll floor again 90 degrees to the first within 1 hour.
j. Clean excess adhesive as you install before it is allowed to dry. Use a soapy clean, soft cloth to remove wet excess adhesive.
k. Clean up all debris as you work.
l. Wait 24 hours for normal foot traffic and wait 48 hours for point and rolling loads after installation.
m. During first five days, minimize heavy wet cleaning to adhesive to fully set.

Special Consideration

a. Direct sunlight: installations in areas where there is heavy direct sunlight exposure for long periods of time should utilize window treatments.
b. Protecting new installations: new installation must be protected while the adhesive cures. Early foot traffic, point, or rolling loads can cause adhesive displacement or breaking of the bond between the adhesive and the plank or substrate.

ROUTINE MAINTENCE

To get your new AFD's LVP looking its best, AFD recommends the following initial maintenance procedures.

*Use non-staining matting system at exterior doors that is appropriate for soil load and weather conditions.

*Use appropriate floor protectors, glides and wheels and do not drag or slide objects across the surface of the floor.

*Do not use abrasive cleaners that can scratch the floor surface or detergent cleaners that leave a residue.

Day 1

*Stay off the new floor. Minimize traffic.

Day 2 – 4

- Dust mop, sweep or vacuum the floor to remove lose dirt and grit.
- Lightly damp mop (well wrung out mop) floor properly diluted Neutral cleaner solution.

Day 5

*Choose from multiple routine maintenance options to suit individual circumstances and end user preference.