



## **Xulon Luxury Vinyl Planks-Glue Down Installation Guide**

### **Luxury Vinyl Planks**

Xulon's Luxury Vinyl Planks (LVP) can be installed on any grade (On, Above or Below) which is ideal for homes with cement subfloors or basements. LVP is intended for interior direct glue applications only and these instructions are intended to provide guidance on the proper installation of this product. The ability to install this flooring over radiant heated substrates is applicable so long as the maximum temperature of the substrate does not exceed 85°F. Individuals need to read, fully understand and adhere to the instructions in the guide prior to beginning installation and not following these instructions can negatively affect the products performance. It can cause the LVP to shrink, gap, edge curl or have adhesion/bonding problems if the instructions are not followed with regards to acclimation, storage, handling, temperatures, preparation, site conditions, installation or floor care. Any changes from these instructions will be done at the installer's own risk and Xulon Flooring will not be responsible for any issues that arise with the flooring.

### **Materials handling and storage**

1. All flooring material and adhesive should have a minimum of 48 hours to acclimate to room temperature prior to the start of installation.
2. Cartons must be stored flat and squarely on top of one another while making certain that the cartons are not leaning or on the edge. It is recommended not to stack no more than 4 to 6 cartons high.
3. It is recommended that cartons not be stored in cold rooms, directly on cold cement or placed in direct sunlight during acclimation.
4. It is the installer and end-user responsibility to inspect the material to verify that they have received the correct color and pattern, that all cartons come from the same batch and lot number and there are no defects prior to the installation of material. Completion of installation will be determined as acceptance and satisfaction of the materials.

### **Basic Tools Needed:**

- Tape Measure
- Square ruler
- Chalk line
- Utility knife
- Hand/Seam roller
- 75lb roller

## **Adhesives and Patches/Levelers**

Call Xulon Flooring for recommended adhesives and/or patches and levelers. Use of any other adhesive and/or patch/lever that is not recommended by Xulon Flooring will not be covered under the warranty and Xulon Flooring will not take responsibility.

## **Jobsite Conditions**

- All areas receiving Glue Down Luxury Vinyl Planks must be clean, fully enclosed, be well lite and weather tight.
- One week prior to the installation of the flooring, the building's heating and air conditioning system must be fully operational.
- Portable or temporary heaters will not be acceptable as a replacement for the building's heating and air conditioning system.
- The interior temperature of the areas receiving flooring must be maintained with a minimum temperature of 65°F (18°C) and a maximum of 85°F (29.4°C) for 48 hours before, during and 48 hours after completion.
- For the service life of the flooring, temperatures should never fall below 55°F (13°C) as this can cause the flooring to shrink, gap or cause other product problems.

## **Subfloor Preparation**

- On or below-grade slabs are required to have an effective vapor retarder directly under the slab.
- All substrates must be smooth, structurally sound, permanently dry, clean and free from all foreign materials that are not limited to dust, wax, solvents, paint, grease, oils, old adhesive residue, curing and hardening/curing compounds, sealers and other foreign materials that might prevent the adhesive bond.
- The preferred method of curing new concrete is wet curing 7 days and any curing compounds should be removed 28 days after placement so that the concrete can begin to dry.
- Curing compounds should not be used on concrete substrates and should they be present it can interfere with the bond of the adhesive to the concrete. Should curing agents be detected, seek the immediate assistance of a substrate manufacturer.
- All concrete floors must be flat and smooth within 1/8" in 6 feet or 3/16" in 10 feet while the temperature should be between 55°F and 95°F.
- Surface cracks, grooves, depressions and other irregularities must be filled or smoothed with latex cement patching compound recommended for filling or smoothing. Patching or underlayment compound must be moisture-, mildew-, and alkali-resistant, and, for commercial installations, provide a minimum of 3,000 psi compressive strength after 28 days.
- Do not sand, patch or "skimcoat" over existing adhesive residue. The use of chemicals or solvent-based adhesive removers is prohibited as these products leave residues in the substrate that can adversely affect the flooring or new adhesive bond. There is the possibility to hand-scrape move of the existing adhesive from the floor, encapsulate and smooth residual with an approved cement based patching compound if the patching compound manufacturer's instructions for proper procedures and any asbestos warnings are followed.

## **Substrates**

### **Concrete**

- All concrete substrates should be tested for IRH (Internal Relative Humidity) in accordance to ASTM F 2170. Calcium Chloride tests may be conducted in addition to IRH and must be performed per the latest edition of ASTM F 1869.
- 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>.
- Installation of this flooring is not to be completed over plywood underlayment that has been attached to concrete, expansion joints, crack isolation joints or other moving joints in concrete slabs. Flooring material should be cut to either side of the joint and then covered with a T-molding type transition.
- Moisture Vapor Emission Rate (MVER)
  - 200 & Kwikflash Adhesive-may not exceed 85% RH
  - S150 & 4100 Adhesive-may not exceed 90% RH
- The working and open times of adhesives can vary based on substrate, temperature, job conditions and humidity.
- Do not apply adhesive over polished or reflective concrete.
- Xulon Flooring is not responsible for any issues with joint or texture telegraphing, tunneling or ridging over any underlayment joints.

### **Wood**

- All wood subfloors are required to follow local building codes as well as be structurally sound.
- This material cannot be glued or installed directly over unsuitable substrates that include but are not limited to: adhesive residue, exterior grade plywood, OSB, strip hardwood flooring, chemically treated wood, particle board, chipboard, flakeboard, fiber or cement board, Masonite, pressboard, gypcrete or gypsum-based products.
- Any double-layered APA rated plywood subfloors should be a minimum of 1" in total thickness with at least 18" of well-ventilated air space below it.
- Any crawl spaces must be insulated and protected with a vapor barrier that covers the ground.
- Installation over sleeper construction subfloors or wood subfloors applied directly over concrete is strictly prohibited.
- Customers and installers should always follow the underlayment manufacturer's installation instructions and it is highly recommended that your chosen APA underlayment grade panels be designed specifically for installation under resilient flooring with a written warranty that covers the replacement of the entire flooring system.
- The correction to smooth over or eliminate telegraphing of the base floor or to cover over unsuitable substrates in wood subfloors, the use of APA grade 1/4" thick plywood underlayment or similar panels that are warranted by the plywood manufacturer for this application should be installed.
- We are not responsible for any failures in the performance of the underlayment panel and rest with the panel manufacturer.

## **Radiant Heat**

- The approval of radiant heated floors and their products with resilient vinyl flooring must come from Xulon Flooring.
- All radiant heated components must have a minimum of 1/2" separation from the flooring.
- The radiant heating system should be on and operational for at least 2 weeks prior to the installation of floating LVP as to reduce any residual moisture within the concrete.
- At least three days prior to installation the temperature should be lowered to 65°F and then turned off 24 hours prior to and after installation.
- The subfloor temperature should never exceed 85°F (29°C) and 24 hours after installation, a gradual increase in temperature should be in increments of 5° F per hour to avoid overheating.
- It is highly recommended that an in-floor temperature sensor is used to also avoid any overheating issues.

## **Testing**

### **Concrete Moisture Testing**

- The User is responsible for moisture testing all concrete substrates regardless of the grade level or age to verify that acceptable limits of moisture are acceptable to the adhesive being used. Concrete slabs need to have cured for a minimum of 90 days prior to any moisture tests being performed and should moisture levels not be within the acceptable limits shown than the flooring cannot be installed.
- Follow moisture testing and procedure guidelines established by the adhesive manufacturer.
- Only two moisture test methods are acceptable: The Relative Humidity (RH) test or the Calcium Chloride (CC) test
- The use of moisture meters, plastic sheet tests and/or bond tests are not acceptable quantitative test methods by industry standards
- For use of the Relative Humidity (RH) test-follow the ASTM F 2170, Standard and for use of the Calcium Chloride (CC) test-follow the ASTM F 1869 Standard (Moisture Vapor)
- It is strongly recommended that users document and save all acceptable testing results

### **PH Paper Test- Surface Alkalinity on Concrete Substrate**

Concrete is naturally high in alkalinity and under normal conditions would not affect vinyl planks and adhesives. It does become a factor when concrete surface alkali salts build up which normally results in excessive moisture vapor transmission through the concrete slab. The moisture carries alkali salts from the interior of the slab to the surface which remains behind after the moisture evaporates and has been known to degrade adhesives and vinyl planks which causes poor adhesive bonding, appearance, maintenance difficulties and the most extreme cases, total floor failure.

- The most common test performed is the pH Paper Test which measures the alkalinity to reveal any excessive surface alkali which is expressed in terms of a pH number.

- Tests for PH in concrete floors must be completed prior to installation of resilient flooring and read with a pH scale that ranges from 1 to 14 with 7 being neutral. If the readings are below 7.0 or in excess of 10.0 than it has been known to affect the resilient flooring or adhesives or both.
- Contact the adhesive company if the pH readings are questionable.

### **Curing Compounds and Sealers**

The use of curing compounds and sealers may not be compatible and can interfere with the adhesive and the flooring material on concrete substrates. It is not recommended that Xulon's LVP be install over these products and the removal of the products can be done with a grinding/abrading machine or something similar. Individuals should consult with the adhesive company for remediation and a bond test should be performed to determine if adhesion properties are acceptable.

### **Preparation of installation over existing resilient flooring**

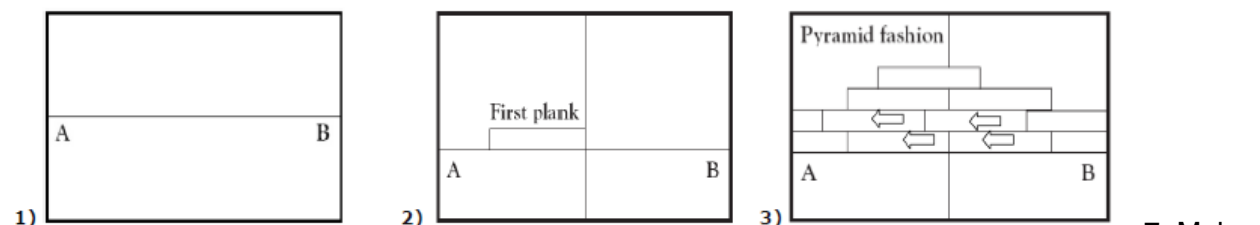
- The existing resilient flooring cannot be more than one layer in thickness and users should never install new flooring directly over asphalt tile, asphalt-based adhesive or any other adhesives.
- Do NOT install over self-stick tile, linoleum, cushioned resilient flooring, loose-laid or perimeter-fastened floor covering.
- Should surface irregularities, unevenness or deep embossing be found in the existing resilient floors than it must be covered with 1/4" approved underlayment or a cementitious latex embossing leveler can be overlaid or the existing will need to be removed.
- **Warning-** Do NOT sand, dry sweep, dry scrape, drill, saw, bead-blast or mechanically chip or pulverize existing resilient flooring, backing, lining felt or asphaltic "cut back" adhesives. These products may contain either asbestos fibers or crystalline silica and individuals should 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 individuals are positively certain that the product is a non-asbestos containing material, you must presume that it contains asbestos. Regulations may require that the material be tested to determine the asbestos content. Go to [www.rfci.com](http://www.rfci.com) for recommended work practices.
- Should mold and mildew be found on the jobsite, work should halt completely until it has been properly removed by the standards of the U.S. Environmental Protection Agency (EPA) and the moisture has been corrected. Visit [www.epa.gov](http://www.epa.gov) for information on proper removal of mold and mildew.
- Should the existing flooring be ceramic tile Terrazzo, Marble than surface coatings, sealers or glazing is required to be completely removed. The floors must be overlaid with a cementitious latex leveler or patching compound that is specifically designed for covering tile floors. Before install the new flooring, the compound must be fully dry and then bond tests should be performed if porosity or suitability of the substrate is questionable.

### **Installation**

- Prior to installation, inspect the flooring materials for any noticeable defects. Should any be found, do NOT install the product.

- Do NOT install over sealed subfloors, solvent based primers, fillers or on walls, ceilings, in boats or any other moving vehicles.
- Do Not install in rooms with excessive direct sunlight or heat to include wet areas such as patios, saunas, steam rooms, basement sump pumps or exterior areas.

1. Prep all tools prior to installation.
2. Ensure that the substrate has been approved and properly prepared flat for it to be fully glued.
3. Xulon's Luxury Vinyl Planks can be installed along the longest wall or in the center of a large room and worked outwards to ensure the straightness of the flooring.
4. Installers should leave approximately 1/8" expansion space at walls or other vertical obstructions.
5. Follow all manufacturer's instructions for adhesives regarding spray pattern or trowel notch size, adhesive working time and rolling of the floor.
6. To find the center of the floor, measure and mark vertical and horizontal lines across the floor in the exact same traditional way that installation of other planks or ceramic tiles is done (See Picture 1 and 2 below).



7. Make any necessary adjustments to the layout lines to minimize perimeter planks less than 6" as well as that the lines are square and then start work from the center layout lines outwards.

8. Start by laying the first few planks on the guideline as perfectly as possible as this will affect the entire installation (See picture 2 above). The planks must be flush against the adjoining plank and then continue to lay the planks in a pyramid style with accuracy without sliding them into place as demonstrated in picture 3 above.

9. Should directional arrows be printed on the back (Picture 3), make sure to point those arrows in the same direction.

10. During installation of the planks whether they are in a random or set pattern, space the end joints a minimum of 6" away from the end joints of the previously installed row.

11. For the best overall color and shade in the appearance of the installed floor, mix the flooring from several cartons.

12. For fitting around irregular objects, make a pattern out of heavy paper to fit around any pipes or irregularities and then place that pattern on the plank to trace cut along the lines.

13. After installation has been completed, do not allow traffic on the floors for 24 hours and should not be exposed to rolling traffic for a minimum of 72 hours so that proper curing of the adhesive occurs.

14. Should construction continues after the installation, wait a minimum of 12 hours, sweep the floor and cover it with a breathable construction paper to protect the floor from soil and foot traffic.

15. Do NOT flood mop and do NOT begin damp mop maintenance for a minimum of 72 hours after installation.

### **Preventative Maintenance and Repairs**

- Protective mats are encouraged to be used at all door entrances, around sinks and tubs to catch dirt, grit, sand, other debris and excess water.
- To prevent scratches and markings, attach floor protectors to the bottom of the furniture and use walk-off mats at entryways. Make sure the mats are made with natural fibers as those with chemical or petroleum-backed mats can stain or fade the flooring.
- Should the floor be exposed to rolling traffic or heavy appliances, the use of plywood or hardboard panels will protect the floor.
- The use of soft rubber wheels on rolling office chairs and under-chair hardboard mats will help to protect the flooring from any scratches or markings.
- Should an issue arise with the flooring that it requires a repair or has been damaged, save extra planks from the initial order as it will guarantee the lot number and shade compatibility of the flooring.
- Should a plank need to be replaced, mark and score it with a utility knife from corner to corner while taking great care to not damage the planks next to it. Use a hair dryer approximately 4 inches from the surface of the damage plank to heat the plank from the center outwards as to loosen the adhesive and ensure maximum pliability but bare in mind that the plank should be hot to the touch. Pry up the damaged plank and re-apply adhesive should it be required and then install the new plank.