



DIRECT GLUE PLANK INSTALLATION GUIDELINES

GENERAL INFORMATION

All instructions and recommendations are based on the most recent information available. If you have received a paper copy of these instructions, please refer to www.efhardsurfaces.com to ensure you have the most up to date version of our installation instructions. This product is intended to be glued directly to the subfloor.

Engineered Floors requires the use of one of our approved adhesives for LVT. Please contact hstechservice@engineeredfloors.com or 1-866-706-9745 Ext. 7105 to obtain a list of adhesives.

Failure to follow these guidelines may result in an installation failure (i.e. flooring may expand or contract, resulting in gapping). Engineered Floors LVP is an interior product and must be installed in an acclimatized (temperature controlled) environment, maintained between 65 - 85 °F (18° - 29°C). It is recommended that the HVAC be operational a minimum of 7 days prior to installation. Please keep in mind a concrete floor can be up to ten degrees colder than the actual room temperature.

Acclimate material a minimum of 48 hours prior to installation in the room/location where the installation will take place. Do not store directly on concrete, allow for air circulation. Do not open the cartons but spread them out and protect corners from damage. Regardless of new construction or remodeling projects, keep flooring stored in rooms that are not being worked in and only install product after all other trades have completed work that could damage the flooring. Do not stack more than 5 cartons high.

Avoid exposure to direct sunlight for prolonged periods; such exposure may result in discoloration, and excessive temperatures can cause the flooring to expand and lift off of the subfloor. During peak sunlight hours, the use of the drapes or blinds is recommended.

To minimize shade variation, mix and install planks from several cartons.

Inspect all planks for damage before installing. If you have any concerns about the product fit or finish, please contact Engineered Floors Technical Services at 1-866-706-9745. Claims will not be accepted for flooring with visible defects that have been cut to size and/or installed.

This product can be installed on, above, or below grade. However, excessive moisture in the subfloor could promote mold, mildew growth and other moisture related issues like the trapping of moisture emissions under the flooring, which may contribute to an unhealthy indoor environment. Engineered Floors does not warrant nor is responsible for damage to floor covering due to moisture related issues.

SUBFLOOR PREPARATION

Proper preparation of the subfloor is a major part of a successful installation. Roughness or unevenness of the subfloor will telegraph through the new flooring. All subfloors should be smooth and dust free with a flatness tolerance not exceeding more than 1/8" in a 6' span or 3/16" in 10'. All subfloor patching must be done with a non-shrinking, water resistant Portland based compound and allowed to dry completely prior to installing flooring. All floor patch would be considered porous and should be primed an approved floor primer when using adhesives. Do not use solvent based adhesive removers. The use of such adhesive removers can leave a residue in the subfloor and cause bond issues with the adhesive. The pH of the subfloor should not exceed 9.0 and should not be lower than 7.0. High or low pH readings will negatively affect the flooring and adhesive and will require mitigation. Follow adhesive manufacturer's guidelines.

WOOD SUBSTRATES

Wood subfloors must be structurally sound and in compliance with local building codes. Double-Layered APA rated plywood subfloors should be a minimum 1" total thickness, with at least 18" well ventilated air space beneath. Insulate and protect crawl spaces with a vapor barrier covering the ground. DO NOT install over sleeper construction subfloors or wood subfloors applied directly over concrete.

***NOTE:** Particle board, chip board, flake board, or similar require an additional layer ¼" APA approved underlayment. Fire- retardant treated plywood or preservative treated plywood are also not recommended. The materials used to treat the plywood may cause

problems with the bonding of the adhesive. An additional layer of APA rated 1/4" thick underlayment should be installed. Underlayment panels can only correct minor deficiencies in the sub-floor while providing a smooth, sound surface on which to adhere the luxury vinyl plank. Any failures in the performance of the underlayment panel rest with the panel manufacturer and not with Engineered Floors®. It is recommended that your chosen APA underlayment grade panels be designed for installation under resilient flooring, and carry a written warranty covering replacement of the entire flooring system. Always follow the underlayment manufacturer's installation instructions. Any failures in the performance of the panel rest solely on the panel manufacturer not Engineered Floors.

STRIP PLANK WOOD FLOORING

Due to expansion /contraction of individual boards during seasonal changes a 1/4" or thicker APA underlayment panels must be installed over these types of subfloors.

CONCRETE SUBSTATES

New concrete slabs must be completely cured. All slabs on grade or below grade must have an effective vapor barrier under the slab. Concrete subfloors must be dry, flat, smooth and free from dust, solvent, paint, wax, grease, oil, asphalt sealing compounds and other extraneous materials. The surface must be hard and dense, and free from powder or spackling. Holes, grooves, control joints (saw joints) and other depressions must be filled with a patching compound and troweled smooth and feathered even with the surrounding surface. The concrete should have a moisture reading no greater than 90% RH or a MVER no greater than 8lbs Calcium Chloride. All moisture testing should be done in accordance with ASTM F2170 for RH and ASTM F1869 for Calcium Chloride testing. The personal responsibility for determining if the concrete is dry enough for installation of the flooring lies with the floor covering installer. It is recommended to follow adhesive manufacturer's requirements.

LIGHTWEIGHT CONCRETE

All recommendations and guarantees as to the suitability and performance of lightweight concrete under resilient flooring are the responsibility of the lightweight concrete manufacturer. The installer of the lightweight product may be required to be authorized or certified by the manufacturer. Correct on-site mixing ratios and properly functioning pumping equipment are critical. To ensure proper mixture, slump testing is recommended. Lightweight aggregate concretes having densities greater than 90 lbs. per cubic foot may be acceptable under resilient flooring. Concrete slabs with heavy static and/or dynamic loads should be designed with higher strengths and densities to support such loads. Surface must be permanently dry, clean, and smooth, free of all dust, and structurally sound. Perform a bond test to determine compatibility of adhesive to the substrate. All Lightweight concrete should be primed with a premium floor primer to promote adhesion.

RADIANT HEAT

Subfloors with an embedded radiant heating system are acceptable, provided the temperature of the subfloor does not exceed 85° Fahrenheit at any point. The heat source should be separated from the flooring system by at least 1/2". The system should be operational seven days prior to installation to reduce residual moisture in the subfloor. Three days prior to install the lower the temperature to 65°. 24 hours after install the temperature can be raised in 5° increments to avoid overheating. The temperature should not exceed 85°. The use of an in-floor temperature sensor is recommended to avoid overheating.

WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEADBLAST OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC (CUTBACK) ADHESIVES OR OTHER ADHESIVES.

These products may contain either 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 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 the removal and disposal of material. See current edition of the Resilient Floor Covering Institutes (RFCI) publication Recommended Work Practices for Removal of Resilient Floor Coverings for detailed information for instructions on removing all resilient covering structures. For more information go to www.rfci.com

EXISTING RESILIENT SHEET FLOORING

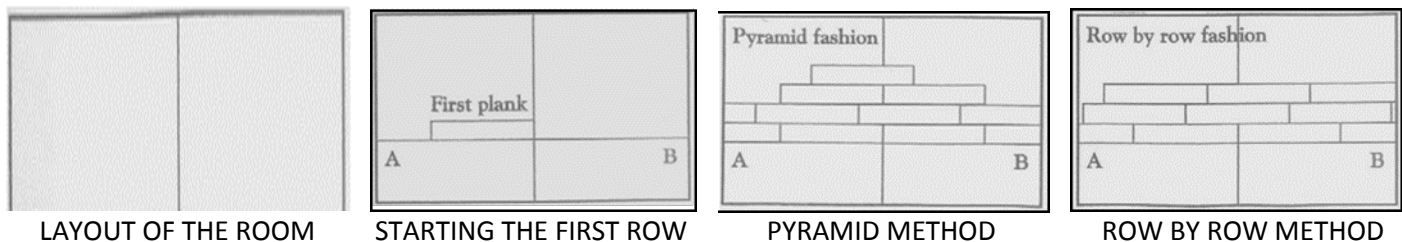
Existing resilient must be single layered, non-cushioned, fully adhered, and smooth. The floor should show no signs of moisture or alkalinity. Any waxes, polishes, grease, grime, and oil must be removed with an appropriate stripper and/or cleaner. Any cuts, cracks, gouges, or other irregularities must be repaired or replaced. Grout joints in existing tile flooring should be leveled with a patching compound to prevent telegraphing. It may be necessary to grind or sand any highly polished or smooth surfaces to promote adhesive bonding to the existing floor.

CAUTION: If you plan on removing old resilient flooring material or any type of old adhesive, please be aware that it may contain asbestos fibers or crystalline silica; therefore avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard and local regulations may require professional removal. Instructions for the removal of old flooring materials may be found in the RFCI Recommended Work Practices for Removal of Resilient Floor Coverings. You may contact the Resilient Floor Covering Institute at 706-882-3833 or www.rfci.com.

INSTALLATION

1. Find the center point of the room. Mark the center line with a chalk line. Obtain a true 90° angle by using a laser square or a carpenter's square. Mark a second line which will divide the room into four equal parts.
2. Measure the distance from the center to the wall, parallel to the direction of the plank.
3. Divide the measurement by the width of the plank. If the measurement is less than half a plank, the center point will need to be adjusted accommodate a larger piece. This will allow for a larger piece along the wall and will prevent small pieces or slivers.
4. Apply adhesive with recommended trowel following adhesive manufacturer's guidelines concerning drying and working time.
5. Carefully place the first piece of plank at the junction of the chalk lines. Install tiles and planks running in the same direction using the directional arrows on the backing side.
6. Engineered Floors requires that the end joints be staggered a minimum of 8".
7. Continue to lay the plank, making sure each plank flush against the chalk line and tight against the adjoining plank.
8. Make sure the plank is well seated into the adhesive paying special attention, to the edges. Lay in a pyramid fashion or row by row, as shown below.
9. Measure the distance from the last plank in the row to the wall. Mark the plank and cut it against the mark.
10. To properly cut LVT/LVP products score the top side of the material with a utility knife. Bend the product and finish the cut through the backside. This will ensure the cleanest cut. It may be necessary to use a heat gun to cut around vertical obstructions. Allow the heated LVT/LVP to return to room temperature before installation.
11. Lay the plank in place, making sure that the cut edge is against the wall.
12. Make a pattern out of cardboard or heavy paper to fit around pipes and other irregularities. Place the pattern on the plank, trace cutting along the trace lines.
13. **IMPORTANT:** All flooring installations must be rolled with a minimum 3 Section 100-lb roller after installation. Use a hand roller in areas not reached with a 100-lb. roller. Re-roll the entire area after the install has been completed and within working time of the adhesive.

ILLUSTRATION



REPAIR DAMAGED PLANK:

If a plank becomes damaged to the extent that it needs to be replaced, use the following procedure:

1. Place painters tape on the edges of the planks surrounding the damaged plank. This will keep the adhesive from getting on the face of the surrounding planks.
2. Use a sharp utility knife (razor knife) to score down through the joints on all four sides of the damaged material.
3. Then cut completely through the plank and remove the damaged plank.
4. Reapply a light coat of adhesive to the floor allowing sufficient tack.
5. Install the new material into the area and roll in the length and width directions.

For additional questions and warranty information, please visit our website at www.efhardsurfaces.com or contact Engineered Floors Technical Services: hstechservice@engineeredfloors.com or 1 866.706.9745. Ext. 7105.