LVT

INSTALLATION INSTRUCTIONS FOR DRYBACK (GLUE-DOWN) RESILIENT FLOORING WITHOUT A LOCKING MECHANISM

WARNING! Do not chip or pulverize existing resilient flooring, backing, lining felt, asphaltic “cutback” adhesives or other adhesives. Previously installed resilient floor covering products and the asphaltic or cutback adhesives used to install them may contain either asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of asbestos or crystalline 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 previously installed 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 the current edition of the Resilient Floor Covering Institute (RFCI) publication “Recommended Work Practices for Removal of Resilient Floor Coverings” for detailed information and instructions on removing all resilient covering structures.

ACCLIMATION, MATERIAL STORAGE & HANDLING

- HVAC systems must be installed, fully functional and operating prior to bringing the flooring material on site. DO NOT acclimate or install resilient flooring products until the work area can be temperature controlled.
- The permanent HVAC system must be turned on and set to 65°F – 85°F for a minimum of 7 days prior to, during, and after installation.
- Flooring and adhesive must be acclimated to the installation area for at least 48 hrs. prior to installation.
- During acclimation, store the cartons of flooring on a flat, dry surface near the center of the room where they will be installed, away from vents, direct sunlight, or other sources of heat or cooling.
- If stacking cartons on a pallet, be sure to lay a layer of 5/8” or thicker plywood on the pallet prior to stacking the flooring. Do not stack cartons more than 6 cartons high.
- After installation is complete, the indoor temperature should never go below 55°F or above 85°F.

SUBFLOOR SUITABILITY AND PREPARATION

All subfloors must be smooth, structurally sound, free of movement, permanently dry, clean, free of excessive alkali, free of all foreign material such as dust, mold, wax, solvents, paint, grease, oils, old adhesive residue, adhesive removers, curing/hardening compounds, petroleum-based products of any kind, and other foreign material that might prevent adhesive bond.

Without exception, testing is required on all installations in order to confirm suitability of the substrate prior to starting installation. Testing requirements vary depending on subfloor type and other considerations (see below under SUBFLOOR REQUIREMENTS BY TYPE' for details).

For all subfloors, after preparing the subfloor for installation, perform a bond test to confirm compatibility of the adhesive to the substrate. After 48 hrs., the adhesive should be dry and the flooring very difficult to remove.

All subfloors must be flat and smooth within 1/8″ in 6 feet or 3/16" in 10 feet. Use cementitious patching and leveling compounds to smooth or flatten the floor as needed. Gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement or synthetic gypsum and meet or exceed the compressive strength of 3,000 psi are acceptable. Always follow the patching/leveling compound manufacturer's recommendations.

Approved Subfloors:

- Concrete (on all grade levels)
- Approved suspended wood subfloors or existing, well-adhered hardwood floors with APA-rated plywood underlayment installed on top of the hardwood floor to prevent telegraphing.

- Single-layer, fully adhered, existing resilient floors (skim coat required to reduce telegraphing)
- Ceramic tile, terrazzo, marble Polymeric poured (seamless) floors

Do Not Install Over:

- Particleboard, wafer board, OSB or single-layer Sturd-I-Floor panels, unless covered with an APA rated underlayment grade plywood that is smooth, sanded and free of voids
- Existing resilient tile floors that are below grade
- Existing cushioned vinyl flooring
- Carpet
- Hardwood flooring that has been installed directly over concrete
- Paint (new or old), drywall mud or plastering compounds, floor finish, wax, oils, or old adhesive. All residue must be removed before installation.
- Any type of floating floor
- Sleeper systems

Old Adhesive Residue

- Never use solvents or adhesive removers to remove old adhesive residue. Solvent residue left on the sub-floor will affect the new adhesive and floor covering and will void the warranty.

- Do not skim coat over old adhesive. The adhesive may break down and lead to failure.
- If any adhesive is present, it must be either mechanically removed by bead blasting or scarifying, or covered with a self-leveling Portland based underlayment. NOTE: some asphalt-based cut-back adhesives contain asbestos fibers. In such cases, do not use power tools such as grinders or shot-blasters that might create asbestos dust. Seek a substrate product that is approved for covering that old cut-back adhesive in preparation for installation of resilient flooring. Check with the substrate manufacturer for suitability, application instructions, and warranties.

All substrates listed below must be properly prepared and meet certain requirements. There may be other exceptions and special conditions in order for these substrates to be suitable for installation.

SUBFLOOR REQUIREMENTS FOR EACH SUBFLOOR TYPE

It is the responsibility of the flooring installer to perform the tests indicated below or verify that they have been conducted and that the results are acceptable prior to beginning installation.

Concrete Subfloors

- Concrete subfloors must meet the guidelines of ACI 302 and ASTM F710, “Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.”
- New concrete subfloors must be thoroughly dry (at least 6 weeks) and completely cured. If curing agents or hardeners are present, they must be removed by sanding or grinding to prevent adhesive failure.
- All concrete subfloors (new or old) should be tested for Relative Humidity (RH) using in situ relative humidity probes according to ASTM F 2170 and using Calcium Chloride tests according to ASTM F 1869. Refer to the adhesive manufacturer’s guidelines for the acceptable moisture limits. Unless otherwise warranted or guaranteed by the adhesive manufacturer, the maximum test result is 75% per ASTM F 2170 and 3 lbs. per 1000 sq.ft. per 24 hrs. per ASTM F 1869. If the subfloor moisture vapor transmission levels exceed these recommended limits, the concrete should be allowed to dry-out further or the installation of a suitable moisture mitigation system is required. Always follow the recommendations of the manufacturer of any such system.
- All concrete subfloors (new or old) must be tested for proper PH according to ASTM F 710. PH reading must not be below 6.0 or exceed 9.0. Corrective measures must be taken if the pH exceeds these limits.
- Perform a water drop test in multiple areas to help determine porosity. If a drop of water remains on the surface after 1-2 minutes, the concrete may generally be considered non-porous. If results are not conclusive and consistent, additional testing is recommended.
- Resilient flooring should not be installed over expansion joints. Use expansion joint covers designed for use with resilient floorings. Control joints or saw cuts in the concrete may be patched and covered with resilient flooring once the concrete and patch are thoroughly cured.

- On or below-grade slabs must have an effective vapor retarder installed under the slab.

Wood Subfloors

- Do not install over sleepers or wood subfloors installed directly over concrete.
- Standard structural plywood (which generally has voids in the surface ply), chip board, OSB, particleboard, existing wood flooring, fire-retardant treated plywood or preservative treated plywood are not acceptable substrates unless a layer of APA rated underlayment grade plywood with a smooth, void-free and sanded face is installed on top.
- Use only APA rated underlayment grade panels that are designed for installation under resilient flooring.
- Do not install resilient flooring directly over fire-retardant or treated plywood, as those chemical treatments will affect adhesive bond. Add an additional layer of 1⁄4” thick APA rated underlayment to protect the adhesive.
- Wood subfloor panels should be a minimum 1″ total thickness and free of vertical deflection, with minimum 18″ well ventilated air space underneath.
- Screw any areas that are loose or squeak. Flatten edge swelling as necessary. Replace any water damaged, swollen or delaminating sub flooring. All fasteners must be flush with the subfloor panel surface.
- Underlayment panels can only correct minor deficiencies in the sub-floor to provide a smooth for gluing. All subfloor imperfections must be addressed prior to installation of underlayment panels.

- Insulate and protect crawl spaces with a vapor barrier covering 100% of the ground area.
- When installing over existing wood flooring, ensure that all existing wood floor boards are well fastened, and add an additional layer of 1⁄4” thick APA rated underlayment on top to protect the resilient flooring from the expansion and contraction of the wood floor planks.

Lightweight Concrete / Gypcrete Subfloors

- All guarantees regarding 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.
- Lightweight concretes must have a density of greater than 90 lbs. per cubic foot and a compressive strength of minimum 3000 psi.
- Dust from lightweight concrete generated by foot traffic must be thoroughly removed immediately prior to installation. Under normal job site conditions, cleaning of dust may need to be repeated multiple times throughout the course of an installation to ensure that dust is not inhibiting the bonding of the adhesive.
- Consult with the manufacturer of the adhesive chosen to determine whether or not the subfloor must be sealed or primed prior to installation. Always follow manufacturer recommendations.
- Take care during installation not to use excessive pressure when troweling the adhesive. The sharp trowel edges can scratch and

dislodge lightweight concrete chips or dust, which can interfere with proper adhesion.

Existing Resilient Floor Covering

- Must be smooth, fully-adhered, single layered, not cushion-backed, and not rubber-based.
- All finish, wax, oils, drywall dust, plaster, paint, ink, dye, solvents, etc. must be removed prior to installation.
- Must show no signs of moisture or excess alkalinity.
- Cuts, cracks, gouges, seams, ridges, dents, holes and other irregularities in the existing floor covering must be repaired or replaced.
- Use an embossing leveler to smooth the texture in the existing floor, aid in proper bonding and prevent telegraphing.
- If there is any doubt about the suitability of an existing resilient floor covering for installation of new resilient flooring on top, the old flooring should be removed. It is the installer’s responsibility to determine suitability.
- Installations over existing resilient flooring may be susceptible to indentation.

Stone, Terrazzo, Ceramic Tile, or Poured Floors (Epoxy, Polymeric, etc.)

- Must be fully cured and well bonded to the concrete.
- Must show no signs of moisture or alkalinity.
- Cuts, cracks, gouges, dents, seams, low spots, ridges, holes and other irregularities that may telegraph to the surface of the new flooring must be repaired prior to installation.
- Grind any highly polished surfaces.
- Grout joints and textured surfaces must be filled with an appropriate leveler or patch. Refer to the substrate manufacturer's guidelines for suitability on different surfaces.

Radiant Heat Subfloors

- Radiant heat system heating elements must be embedded in the subfloor and have a minimum of 1/2" separation from the flooring product. Electric heating mats that are not embedded into the subfloor are not recommended for use underneath the flooring and will void this warranty.
- The radiant heat system must incorporate electronic temperature controls in all heating zones that restrict the operating temperature to never allow the temperature of the installed floor to exceed 85°F in any area.
- The system design must evenly distribute the heat across the entire floor area, so that the surface temperature of the floor never varies more than 3°F at any point in time across the surface of the heated flooring.
- Thermal gain from windows can have a big impact on the surface temperature of the floor. Window treatments such as UV-blocking

films, blinds, drapes, etc. are often necessary to ensure compliance with the above requirements.

- Before installing over newly constructed radiant heat systems, operate the system at maximum capacity for at least 14 days to force any residual moisture from the subfloor.
- After drying the subfloor for 14 days, test for moisture. For wood subfloors, check and document the moisture content of the subfloor prior to installation using a pin-type moisture meter. Wood subfloor moisture readings should not exceed 8% in any location. For concrete or gypcrete subfloors, conduct and document Calcium Chloride Tests per ASTM F1869 prior to installation. Test results must not exceed 2.0 lbs. per 1000 square feet per 24 hours.
- The radiant heating system must be turned off for 24 hours before, during and 24 hours after installation. During this period, ensure that the temperature in the installation area is at least 65°F (18°C). Use of temporary space heaters may be necessary.
- Once the installation has been completed, the heating system should be turned on and increased gradually (in 5°F increments per day) until returning to normal operating conditions.
- Refer to the radiant heat system manufacturer's recommendations for additional guidance.
- Failure to strictly follow the adhesive manufacturer's guidelines may result in failure and void the warranty.
- After installation, do not cover a radiant-heated floor with protective covering for longer than a few hours. Leaving any type of protective covering on top of a heated floor can create an 'oven effect' and damage the flooring.
- Rugs, mattresses, exercise mats, pet beds, furniture without legs, or other insulating products that cover the floor will trap heat and increase the temperature of the floor, which can result in irreversible damage. When the floor is expected to be covered, the radiant heating design engineer and the radiant heating installer should

calculate and factor in the R-value of the specific insulating item and make adjustments to the heating output as necessary. The end-user must be informed of the effects of heat build-up and subsequent damage.

INSTALLATION

General Guidelines

- Ensure that all recommendations for sub-floor and job site conditions are met prior to beginning the installation.
- Flooring installation should not begin until all other trades are completed.
- Areas to receive flooring should be adequately lighted during all phases of the installation process.
- Each flooring plank must be inspected and deemed visually satisfactory prior to installation. Any material installed with visual defects will not be considered a legitimate claim. Installation constitutes acceptance of the material’s aesthetic attributes, including but not limited to color, gloss, and bevel size.
- Dryback (Glue-Down) LVT can be cut net to fixed vertical obstructions. Removing the baseboard molding and replacing it after the flooring is in place will make the perimeter fitting easier.
- Wherever possible, undercut door frames to allow the LVT to slip underneath and make fitting planks around door frames easier.

Adhesive

- Recommended Adhesives: Bostik Lock A499, XL Brands STIX 2400, TEC Flexera or Flexera HT, or MapeiUltraBond Eco 399. Note: suitability for the specific application and bond quality are the responsibility of the installer and adhesive manufacturer.
- Prior to application of adhesive determine if the substrate is a porous or non-porous substrate as outlined above under ‘Concrete Subfloors.’ Follow instructions on the adhesive label for porous or non-porous subfloor.
- After preparing the subfloor for installation, be sure to perform a bond test to confirm compatibility of the adhesive to the substrate.
- Refer to adhesive label for proper trowel requirements, spread rates, application, and working times. Do not exceed open times as per adhesive manufacturer. Working and open times of adhesives may vary based on job conditions, substrate, temperature, and humidity.
- Protect adhesive from contamination like drywall dust or other debris during installation.
- Check adhesive bond as the installation progresses.
- On lightweight concrete or gypcrete subfloors, avoid using excessive pressure when troweling the adhesive. The trowel edge can dislodge chips or dust that can interfere with proper adhesion.
- Always use new trowels, and change trowels frequently.

Layout

- Plan the layout so that the joints in LVT planks do not fall on top of joints or seams in the existing substrate. Do not install over concrete expansion joints.
- End joints in adjacent rows of flooring should be staggered a minimum of 8” apart.
- Determine which direction the planks will run. Find the center of each of the end walls (the walls perpendicular to the long dimension of the planks) and place a pencil mark on the floor. Connect these points by striking a chalk line down the center of the room. Do a dry layout of planks from the center line to the wall running parallel to the long direction of the planks to determine the width of the last row of planks. Note: plank dimensions stated on the product cartons and in marketing materials are nominal and may not be precise, as they are often converted from metric into standard dimensions and rounded. Do not use the stated dimensions to calculate or make layout decisions.
- Avoid having border pieces less than 3” wide. If you find the border planks will be less than 1/2 the width of the plank, the center starting line should be shifted a distance equal to 1/2 the plank width. This will “balance” the room and provide for a larger cut piece at the wall.

Installation Procedure

- Always open and pull from multiple cartons of flooring at a time to ensure a good blend of color and pattern. Avoid installing visually identical planks next to each other. If multiple production/dye lots are present, be sure to blend them throughout the installation. Refer to the production codes on the carton ends to identify Installation

Instructions for GemCore Glue-Down (Dryback) Resilient Flooring without a Locking Mechanism, v101223 6 production lots/dates. If different lots don't blend to the installer and end-user's satisfaction, stop the installation immediately and contact your retailer or distributor.

- To cut LVT 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. Cutting the product to a fine point may lead to delamination. Cut edges should only be installed against walls or under base moldings.
- Plan each row to ensure that there is a minimum of 8" stagger between end joints and a minimum 6" long piece at the end of each row.
- After snapping the center starting chalk lines, spread the appropriate amount of adhesive and allow it to set, carefully following the adhesive manufacturer's guidelines for spread rate and open time.
- It is crucial that the first row is placed exactly straight against the starting line. Make sure each plank is flush against the chalk line and tight against the adjoining plink. Ends of planks should align and fit squarely. Even slight deviations in the starting row can cause gapping and out-of-square conditions throughout the floor.
- Begin laying planks along the center starting line and install row by row including the cut pieces at the perimeter until the firsts area of adhesive is complete.
- Apply adhesive to the next portion of the floor area, always allowing it to set per the manufacturer's guidelines. Proceed area by area until installation is complete.
- At times it may be necessary to compromise on the tightness of seams in order to make allowances for any unevenness or waves in the subfloor that might be throwing off the alignment of rows.

- After the flooring is installed, immediately roll the entire floor in both directions with a 100 lb. roller. Use a hand roller in confined areas where the large floor roller will not reach, such as under toe kicks.
- The planks may be walked on immediately after rolling, but should not be exposed to heavy rolling load traffic until 72 hours after the installation.
- Use Ram Board, FloorShell or similar breathable flooring protection to protect the floor after installation. Tape the protection product to itself at the seams or to the wall/baseboard at the perimeter, but never to the flooring.

CARE & MAINTENANCE

- Sweep or vacuum daily using soft bristle attachments.
- Place a walk-off mat at outside entrances to reduce the amount of dirt brought into the space. Do not use mats with a latex or rubber backing since these backings can cause permanent discoloration.
- Clean up spills and excessive liquids immediately.
- Damp mop as needed with water, or with a high-quality, pH-neutral vinyl cleaner such as Bona Pro Series Luxury Vinyl Floor Cleaner. Do not use solvent-based cleaners, waxes, oils, bleaches, abrasive cleaners, or products recommended for other types of flooring. Avoid any cleaners that describe themselves as a polish or cleaner and polish in one.’ Polishes can leave a residue that will dull the finish, collect dirt, and can be extremely difficult to remove.
- Do not drag or slide heavy objects such as furniture or appliances across the floor. When moving heavy objects, pick them up

completely and place them on a protective surface such as cardboard or RamBoard so that they can be gently ‘walked’ along that surface.
- Use and maintain proper floor protection devices such as felt protectors under furniture to prevent scratching. Under desk chairs, protect the floor with a hard, smooth-bottom mat that is approved by the mat manufacturer for use with resilient flooring. Rubber, carpet or other soft mats may allow indentations.
- Avoid walking on the floor with cleats, sports shoes and high heels.
- After installation, make sure that the flooring is never be exposed to temperatures less than 55℉ (13°C) or greater than 85℉ (30°C). Direct sunlight on flooring can produce surprisingly high temperatures. Window treatments may be necessary to protect the flooring from high heat.

PLANK REPLACEMENT

- Warm the damaged plank with a heat gun.
- Using a sharp utility knife, cut through a corner of the damaged plank, taking care not to cut into the subfloor below or into adjacent planks.
- Lift the end of the plank and continue heating.
- As sufficient heat is provided, the plank will release from the adhesive.
- Lift out the entire plank and warm the exposed adhesive.
- Install the new plank.
- Set the new plank firmly in place by rolling both directions with a 100 lb. roller.

We want every customer to be happy and satisfied with their floor purchase. If there are claims or questions, or in the event that you are not totally satisfied with your LVT floor, contact your local retailer first. If the retailer is unable to answer your questions, you may contact the manufacturer at the following address:

Attn: Customer Service, 1741 Junction Ave. San Jose, CA 95112
Tel. (888) 261-2871