PUREGRAIN ENDURE

RR014-New Standard Plus, New Standard II, Lifestyle, Timeless Beauty, Pietra, and Preference Installation Instructions

Engineered Floors LLC® ("EF") requires all vinyl flooring supplied by EF be installed according to our most current installation instructions to maintain full product warranty coverage. The most current installation documents and videos can be found online at www.engineeredfloors.com . Instructions on replacing damaged planks as well as maintenance and warranty documentation are also available online. The best practice is to have the flooring installed by professional installation technicians. Keep the original sales receipt (proof of purchase), all moisture/Rh testing, and installers receipt for warranty purposes. EF requires that the flooring be maintained according to our most current care and maintenance guidelines. Please contact info@engineeredfloors.com or 866-706-9745 option 7 for any additional questions not covered in this document.

GENERAL INFORMATION

- Acclimation of material prior to installation is recommended (24 hours) but not required.
- The HVAC system should be operational and set between 65°F - 85°F (18.3°C - 29.4°C) before, during and after the installation period. Keep in mind a concrete floor can be up to 10° colder than the ambient temperature.
- PureGrain Endure can be installed on concrete floors that are on, above, or below grade.
- PureGrain Endure is intended for indoor use only and warranted as floor covering only.
- PureGrain Endure should be installed after all the other trades have finished and the job site has been cleared of any debris that could damage the finished installation.
- Install cabinets and/or permanent 'islands' prior to installing flooring. Do not install cabinets, islands, and such on top of floating flooring.
- Do not install PureGrain Endure in areas subject to frequent standing water or in high moisture areas. This flooring is waterproof from topical moisture, when installed properly, and secures the flooring on all four sides. However, excessive moisture in the subfloor could promote mold, mildew, and other moisture related issues by trapping moisture emissions under the flooring, which may contribute to an unhealthy indoor environment.
- PureGrain Endure has an attached underlayment. Do not install over an additional cushioned underlayment.
- Cartons should be stored horizontally on a flat and level surface with the corners protected from damage. Do not store cartons on their sides.
- When ordering flooring, order 5% more footage than the measured space to receive flooring. Where multiple angles or obstacles exist, more than 10-15% overage may be necessary.
- EF recommends homeowners keep a minimum of one full carton for future repair or replacement.
- Inspect all flooring and confirm the product to be installed is the correct style and color. Do not install flooring that is not the correct style, color, or is from multiple production runs. Do not install damaged or defective flooring. EF will not be liable where incorrect flooring, damaged flooring, or flooring with visible defects have been installed.
- Heavy loads can pin the floating product to the subfloor which may prevent the product from expanding and contracting evenly, causing side or end separation, peaking, and gapping.

MOISTURE BARRIER

- EF requires a 6-8 mil polyethylene vapor barrier or concrete moisture sealer be used under our floating floors that are installed on concrete that is on or below grade.
- The proper application and subfloor requirements of the moisture sealer are the sole responsibility of the dealer/installer.
- EF will not be responsible for flooring failures due to subfloor moisture issues when a moisture sealer has been applied incorrectly.

POLYETHYLENE VAPOR BARRIER INSTALLATION

1. Begin at starting Wall. Roll out the poly parallel to the starting wall and allow it to run up the wall 2".
2. Smooth out any creases or wrinkles.
3. Roll out the next run and overlap the seam a minimum of 4".
4. Smooth out any creases or wrinkles.
5. Use a tape of sufficient width to tape the seams together.
6. Install the flooring over the poly taking care not to damage the poly.
7. To prevent a trip hazard, do not install the poly over the entire subfloor. Roll the poly out one row at a time as needed.

TRANSITIONS

- The transitions for PureGrain Endure are color coordinating. The trim pieces will be close in color and grain but will not be an exact match to the flooring.
- Using the trim as a guide, installers will need to find the planks that have a similar grain and color as the transition. These pieces will need to be placed in the area where they will be installed.
- The ¼" expansion gap must be maintained between the transition and the flooring.

COTTAGES AND THREE SEASONS ROOMS

These products can be installed in fully enclosed 3 season environments such as solariums, sunrooms, three season rooms, and seasonal cottages. Installation in these environments should occur while HVAC is operational and set between 65°F - 85°F (18.3°C - 29.4°C). These products can withstand ambient temperature variations from -20°F (-29°C) to 176°F (80°C) when not occupied. While the space is occupied, the ambient temperature must be maintained between 55°F (13°C) and 100°F (38°C). See the Conditions and Exclusions section of the PureGrain Warranty Guide.

GENERAL SUBFLOOR PREPARATION

- The subfloor must be clean, dry, structurally sound, firm, and secure.
- The subfloor must be flat within 3/16" per 10' radius (4.7 mm per 3 m).
- High areas should be ground, and low areas should be filled.
- All construction seams, expansion joints, and grout lines larger than 1/4" should be filled level with the surrounding surface using cementitious patching and leveling compounds that meet or exceed maximum moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable.
- The subfloor should be free of dust, debris, paint, varnish, wax, grease, oils, curing agents, sealers, solvents, and other foreign matters. Any adhesive residue should be mechanically reduced to a thin well bonded residue.
- Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in and on the subfloor may affect the new floor covering.
- The final responsibility for determining if a subfloor is acceptable for installation of the LVF lies with the floorcovering installer.

WOODEN SUBFLOORS

- Do not install material over wood subfloors, dimensional lumber, or plywood that lies directly over concrete. Refer to ASTM F1482 for panel underlayment recommendations.
- Basements and crawl spaces should be dry. Crawl spaces must have a minimum of 18'' (46 cm) clearance from the ground to the underside of the joists. The crawl space should have perimeter venting equal to a minimum of 1.5% of the crawl space square footage. A vapor barrier of 6 mil (minimum) black polyethylene film is required to cover the entire crawl space. Film seams must overlap 6'' (15 cm) and must be sealed with moisture resistant tape. Where necessary local regulations prevail.
- We do not require a 6-8 mil poly moisture barrier for wood subfloors. The

installation of a moisture barrier on wood subfloors will not void the product warranty.
- Plywood, OSB, particleboard, chipboard, wafer board, etc. must be
- structurally sound and must be installed following their manufacturer's recommendations. Local building codes may only establish the minimum requirements of the flooring system and may not provide adequate rigidity and support for proper installation and performance. It should have a smooth finish and be free from spring and deflection. If this requirement is not met or known, a minimum of 1/4" (6.35 mm) APA approved underlayment grade wood must be adhered to the existing subfloor.
- All fastener indentations and joints should be level and smooth. Use an appropriate patching compound, as necessary.
- We do not recommend installing our LVF over pressure treated or fire-retardant treated plywood. An additional layer of 1/4" APA approved plywood should be installed over these types of plywood.

CONCRETE SUBFLOORS (PORTLAND OR GYPSUM BASE)
- New concrete slabs must be dry and completely cured prior to installation of flooring.
- Concrete should meet the guidelines of ASTM F 710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring" (see www.astm.org/standards/F710).
- Engineered Floors require that all concrete subfloors be tested for moisture. The moisture vapor emission rate should not exceed 8 lbs.
- /1000 sq. ft. per ASTM F1869, and the internal relative humidity should not exceed 90% per ASTM F2170. Records of the testing locations and results should be documented. Three moisture tests should be conducted for areas up to 1000 sf and one additional test, for each additional 1000 sf after the first.
- The pH level should be between 5 and 9.
- Do not install over concrete with a history of high moisture or hydrostatic conditions. Excessive moisture in the subfloor could promote mold, mildew, and other moisture related issues like the trapping of moisture emissions under the flooring, which may contribute to an unhealthy indoor environment. EF does not warrant nor is responsible for damage to floor covering due to moisture related issues.
- EF requires a moisture barrier be installed under our floating floors that are installed on concrete that is on or below grade.
- 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 concrete product may be required to be authorized or certified by the manufacturer. Correct on-site mixing ratios and properly functioning pumping equipment are critical. Slump testing is recommended.
- Lightweight aggregate concretes having dry 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.

EXISTING FLOORCOVERINGS
- PureGrain Endure can be installed over most existing resilient flooring if it is clean, dry, flat, structurally sound, well secured, and free from deflection.
- Existing sheet vinyl flooring should not be cushioned and not exceed one layer in thickness. Soft underlayment and soft substrates will compromise the product's locking ability as well as diminish its indentation resistance.
- These products can be installed over existing ceramic/porcelain tile products. If the grout joint width exceeds 1/4", a Portland based cementitious patching compound should be used to fill the grout joint to make it smooth with the surface of the tile.
- Properly cleanse any existing marble/terrazzo flooring using a commercial degreasing/dewaxing solution. Rinse thoroughly then dry thoroughly. Grind or abrade any highly polished or irregular surfaces.
- Do not install directly over hardwood/engineered hardwood floors. We recommend installing 1/4" APA approved plywood over these types of existing floors.
- Do not install over cushion-backed vinyl flooring, asphalt-based floors, carpet and/or carpet pad, self-adhering plank or tile, laminate, other floating flooring, or structurally- damaged concrete.

Caution: If you plan to remove old resilient flooring material or any type of old adhesive, please be aware that it may contain asbestos fibers or crystalline silica. Avoid creating dust. Inhalation of such dust may cause cancer and/or respiratory issues. Local regulations may require professional removal. Instructions for the removal of old flooring materials and adhesives may be found in the RFCI Recommended Work Practices for Removal of Resilient Floor Coverings document. Contact the Resilient Floor Covering Institute at 706-882-3833 or www.rfci.com for additional information.

RADIANT-HEATED FLOORS
PureGrain Endure can be installed over embedded radiant-heated floors provided the operating temperature never exceeds 85° F (29.4° C). The heating system can be hydronic or an electric mat system. These systems are installed in channels under the subfloor or embedded in concrete, thin set, or patching compound. The heating components must have a minimum of 1/2" separation from the flooring product. The radiant system should be in operation for three weeks prior to installation of the flooring to reduce any residual moisture in the subfloor. 48 hours prior to and during installation, the system should be kept at 65 °F (18.3° C). Once the installation is completed, the heat should be gradually increased in 5° (2.8°) increments per day until the desired setting is reached. Where floor heat is present, be mindful that loose rugs or carpets may function as heat insulators and raise the temperature above the tolerated maximum surface temperature of 85° F (29.4 C). Contact the manufacturer of the heating system for further recommendations.

RECOMMENDED TOOLS AND MATERIALS
Measuring tape, framing/speed square, broom, utility knife, straight edge, spacers, chalk line, embossing leveler/floor patch (if necessary), rubber mallet, tile cutter (optional), table saw, jigsaw

INSTALLATION – GENERAL
- Areas up to 2500 sq. ft. require a minimum of 1/4" (6.35 mm) expansion space around the perimeter of the room and all permanent vertical obstructions. Areas larger than 2500 sq. ft. require 1/2" (12.7 mm) expansion.
- Make certain that doors, moldings, etc. allow sufficient clearance above the flooring.
- EF recommends that the flooring run parallel to the longest wall and into the light when possible.
- When installing, work from 3-4 boxes at a time for best results and overall appearance.
- Avoid exposure to direct sunlight for prolonged periods, such exposure may result in discoloration. During peak sunlight hours, the use of the drapes or blinds is recommended. Excess temperature due to direct sunlight can result in thermal expansion and UV fading.
- Remove existing floor moldings (where applicable) and undercut doorway moldings to the thickness of the subfloor.
- PureGrain Endure should never be nailed to the substrate.
- Planks can be cut across the width using a sharp utility knife and a framing square. Score the surface of the plank/tile with the knife and snap the plank/tile at the score line. A tile cutter or powered saw should be used for cutting along the length.

INSTALLATION – PROCEDURE
1. Carefully measure the room to determine the width of the last row of flooring. If the width is less than 2" (50 mm) excluding the tongue, the width of the first row will have to be cut to increase the last row to more than 2".
2. Begin laying flooring from the left side (the starting wall) and work to the right side. The tongue of the plank should face the starting wall. Make certain that the first row (tongue side) is perfectly straight to ensure subsequent rows properly align. Inspect the groove area and remove any debris that may prevent proper assembly of planks.

3. For best results, a full piece of plank can be used as a bridge to align the end joints in the first few rows. The end joints of the planks in the first row are assembled by overlapping the tongue side over the groove side of the previous plank ensuring that the planks are perfectly aligned. Using a rubber mallet start from the outside edge and tap the end joint.
4. downward until the end of the plank snaps in place. The planks should be flush and even. Assemble the end joints in the first 2-3 rows 6-8" away from the wall without installing the last pieces in each row.
5. The last piece in the first row will need to be cut. Measure the distance between the wall and the surface of the last full piece. Subtract the required expansion space from this measurement to allow for spacer. If this measurement is less than 8" (20cm), the first plank in the row should be cut. The first and last plank in each row should be a minimum of 8" (20 cm) in length. Install the remaining full planks in the first rows.
6. Install the long side of the first plank of the second row. Insert the tongue side into the groove side of the plank from the previous row at a low angle and lower flat to the substrate.
7. Install the second plank of the second row. Position the long side of the plank with the tongue side, fully engage into the receiver of the first row of product. Lower the plank with firm pressure to the floor, ensuring that the end joint is overlapping and perfectly aligned. Using a rubber mallet start from the outside edge and tap the end joint downward and work your way back to the main joint until the end of the plank snaps in place. Continue installing planks in the second row. It is important to make sure that the first 2-3 rows are straight and square as they can affect the entire installation.
8. After the first 2-3 rows have been assembled the installer can insert the spacers and slide the rows in place. Place spacers between the short and long side of the planks and the wall. Always position one space between the wall and where the flooring pieces join.
9. Continue working from left to right, row by row. Be sure to maintain the expansion space around all walls and vertical objects. To maintain a random appearance, remember to offset the end joints a minimum of 8" (20 cm).
10. To disengage the end joints, slide the planks apart horizontally.
11. If the panels cannot be angled to engage the long joints the installer will need to shave the raised portion of the receiving edge from the lip of the installed piece by using a chisel or a small-block plane. Dry fit the piece to make sure it fits. Run a bead of tongue and groove adhesive on the modified groove of the installed piece. Install the piece and use a few pieces of painter's tape to hold the plank in place until the adhesive has dried and cured.

FINISHING THE INSTALLATION

- After all planks have been installed, remove spacers from the perimeter of the room.
- Installers can cover the gap between the bottom of the door jamb and flooring with a latex caulk.
- Install quarter-round or baseboard molding. Molding should be of sufficient size to cover the expansion space and should be fastened to the wall, not to the flooring. Do not fasten any moldings through the flooring.
- When moving heavy items, always carry them. Never push or pull furniture or other heavy items over LVF.
- Use floor protectors under the legs of furniture and chairs. Use chair pads where concentrated roller traffic will occur.
- Installations in wet areas such as bathrooms should be caulked around the perimeter and around the toilet flange using a silicone caulk that remains flexible when dry to retard moisture from getting under the flooring.
- Protect the flooring from subsequent projects using a non-adhering temporary protective material such as Ram Board®.
- UV protective film, blinds, curtains, or shades must be used to assure that PureGrain Endure products are protected from direct sunlight.
- Consult the PureGrain Endure Care and Maintenance document for complete cleaning and care instructions.

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