Bio-Based Resilient Flooring Installation Instructions

Bio-Based Resilient Flooring is a bio-based polyurethane flooring that requires specific installation parameters that may differ from vinyl, rubber, linoleum, and other types of resilient floor coverings. Failure to follow all current installation guidelines and other applicable technical documents may result in unintended installation-related issues, such as failure, and may void the product warranty. Utilizing a manufacturer's recommended flooring contractor and/or manufacturer's certified installer offers the greatest chances of getting quality workmanship and optimum performance from the flooring product. Workmanship of installation is not covered by the manufacturer's product warranty.

RECEIVING & STORAGE UPON RECEIPT

Immediately remove the shrink wrap and carefully check all materials for shipping damage. Visible damage not reported on the bill of lading is the responsibility of the flooring and/or general contractor. Confirm the colors, styles and quantities are correct. If there are different production lots, it is the responsibility of the flooring contractor to determine if they are acceptable to use on the project. STORE all flooring products, adhesives and accessories in a dry interior area maintained between 65-80°F (18-27°C). The ambient relative humidity (RH) should be between 35-65%. Temperatures and humidity are to be managed and maintained before, during and after installation. **Do not stack pallets.**

SUBFLOORS & UNDERLAYMENTS WOOD SUBFLOORS

When installing over wood subfloors and underlayment panels, follow the current ASTM-F1482 standard practice for installation of panel type underlayment to receive resilient flooring. They must be compliant with APA or be manufacturer recommended as "Underlayment Grade" for resilient flooring. When conducting moisture and pH testing, use a Calibrated Wood Pin Meter and follow the current ASTM D4444 testing methodology and ASTM D7438 for field calibration of handheld moisture meters.

CONCRETE SLABS & UNDERLAYMENTS

New and existing concrete slabs shall follow all current versions of the following standards, guides, and codes:

- ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring, as per American Concrete Institute
- ACI 201.2 Guide to Durable Concrete
- ACI 302.1 Guide to Concrete Floor and Slab Construction
- ACI 302.2 Guide for Concrete Slabs to Receive Moisture Sensitive Flooring Materials

Observe all local and national building codes and always document your testing and evaluation.

Note: All on grade and below grade concrete slabs must have a confirmed and effective vapor barrier installed directly underneath the slab that meets the requirements of ASTM E1745. If this cannot be confirmed, then use an appropriate moisture reduction or mitigation system that conforms to ASTM F3010. All moisture mitigation systems carry their own manufacturer's warranty and are not covered by the flooring product warranty. Consider Commercialon Premium Sealer for slabs that test between 95%-97% RH. Perform and document moisture testing in accordance with ASTM F2170 Standard Test method for Determining Relative Humidity in Concrete Floor Slabs Using In-situ Probes. Confirm results are within RH moisture and pH limits for the specified adhesive. Testing should include high risk moisture areas such as where plumbing trenches have been cut into the concrete subfloor and newly poured concrete is present. This includes near outside walls, saw cuts, expansion joints, etc. Be aware that if curing compounds have been used, they can act as a bond breaker if not fully removed prior to installation. Expansion, isolation, and other moving joints shall not be filled or covered with any floor covering. Moving joints must be treated with an expansion joint covering system as specified. Thick-pour gypsum-based underlayment must be manufactured and installed in compliance with ASTM F2419 Standard Practice for Installation. Test and evaluate thick-pour underlayment moisture content in accordance with the manufacturer's recommendations and follow the manufacturer's installation guidelines. Preparation of the surface to receive resilient flooring must be done in accordance with ASTM F2678.

EXISTING FLOOR COVERINGS

It is normally required to remove all existing floor coverings. Removal of existing adhesives and contaminates is mandatory, and install directly on the base subfloor. Realizing there are situations where this is not possible, flooring products may be installed over existing fully bonded and intact flooring, including ceramic and quarry tile, stone, terrazzo, non-cushioned single-layer resilient (sheet or tile), polymeric, resinous, or seamless poured floors on suspended or on-grade installations. Do not install over existing resilient floors when below grade. Below grade installation must take place on a properly prepared subfloor. Do not install over existing cushioned resilient flooring, rubber, or safety (slip resistant) flooring. Existing flooring must have all loose or damaged areas removed and all finish or polish stripped off. Once the damaged areas are removed and the surface is thoroughly clean, prepare the surface by leveling and smoothing with an appropriate patching compound. Note: Glazed, polished, smooth or dense surfaces must have the surface mechanically abraded. In addition, surface preparation materials may require the use of a primer or bonding agent prior to application. It is difficult to confirm if existing floor coverings are well bonded to the substrate and if they are prone to moisture related issues, especially when covered with an impervious surface. Installing over existing flooring materials may affect the performance and warranty of the new flooring materials being installed. It is the responsibility of the Flooring contractor to determine substrate suitability.

RADIANT HEATED FLOORS

Radiant heated subfloors must not exceed 80°F (27°C) under any condition of use. The heating system's components must have a minimum of 1/2 inch separation from the flooring product. The system must be turned on and operational for at least two weeks prior to installation to reduce residual moisture. Three days prior to installation, lower the temperature to 65°F (18°C). After installation, gradually increase the temperature in increments of 2°F (3.6°C) per day to avoid overheating. Use of an in-floor temperature sensor is recommended to avoid overheating. Contact the manufacturer of the radiant heating system for further recommendations and warranty details.

JOBSITE EVALUATION & PREPARATION

All warranties and guarantees pertaining to the suitability, performance, and use of ancillary materials rest solely with each product manufacturer, the flooring contractor, general contractor or party who approved its use or practice. Do not install flooring products without performing a thorough jobsite evaluation and rectifying all non-conforming conditions. See the following conforming checklist:

- Review all requirements and expectations and inspect and document all jobsite conditions.
- Be aware that if curing compounds have been used, they can act as a bond breaker if not fully removed prior to installation.
- All subfloors must be tested for moisture and be confirmed as complying with flooring and adhesive manufacturer's specifications before proceeding. (See subfloor section for details.)
- Address any subfloor level and flatness concerns.
- Request necessary lighting and coordination with other trades to vacate the space during subfloor preparation and installation. All painting and overhead work should be completed to avoid damage from equipment and painting chemicals.
- The building envelope must be enclosed with the roof, walls, windows, and doors installed. The fully operational HVAC system must be working at typical operational temperatures for a minimum of 1 week and preferably 2-3 weeks before starting installation and remain fully functioning after the installation has been completed.
- The subfloor must be suitable for intended use and rigid, smooth, level, flat to 3/16 of an inch over a 10-foot maximum plane variation (5mm in 3m) and 1/32 of an inch over 1 foot (1mm in 30cm), permanently dry, clean, and free of all foreign materials. All foreign substances on the substrate must be removed by sanding or other abrading techniques. Sealing and/or skim coating is not a substitution for sanding/mechanical removal.

Level all high spots and fill and smooth surface cracks, grooves, depressions, stationary control joints or other non-moving joints, and other surface defects. Use high quality Portland cement and/or calcium aluminate-based patching and leveling compounds. Mapei Planipatch is preferred. The underlayment shall be mold, mildew, and alkali resistant, non-shrinking and water-resistant with a minimum of 3,500 lbs. PSI cured compression strength. Follow the patch manufacturer's current instructions and guidelines. No patching compounds shall be used unless recommended and warranted by the product manufacturer as project compliant and approved by the specifier. (See additional details in Concrete subfloor section)

- Excessively porous and/or dusty structurally sound substrates may be primed by following the application and use instructions of an acrylic-based primer sealer. This practice can offer maximum adhesion properties, use less adhesive, and optimize working time.
- After sealing and patching, using self-leveling compounds as a preferred option, sand the surface to remove all ridges and rework any remaining low spots or surface defects.
- Vacuum the entire surface, corners and perimeter using a HEPA filtered vacuum to remove all dust and debris.

JOBSITE CONDITIONS ACCLIMATE

All materials in the areas where they are to be installed. The area should be maintained between 65-80°F (18- 27°C) and the ambient relative humidity (RH) should be between 35-65%. Temperatures and humidity are to be managed and maintained before, during and after installation. Lay boxes out on a smooth, flat, dry surface for at least 48 hours. Leave box ends closed but do not stack more than three cases high. All adhesive and subfloor preparation materials should be acclimated as called for by their manufacturer. The goal is to acclimate and condition all materials and the jobsite environment to closely match the facility's operational environmental conditions. Check the subfloor surface, flooring materials and sundries with a temperature gauge and confirm all are within 3°F (5.4°C) of one another. Windows where the flooring is to be installed should not have excessive solar heat transmission. It may be necessary to apply a protective film on the windows or cover them with cardboard or other similar material to ensure the substrate does not exceed 80°F (27°C). Keep windows covered for a minimum of 72 hours after installation. Failure to do so may result in damage to the flooring and warranty implications.

TOOLS

Quality workmanship is dependent on the use of the recommended tools for a quality installation. Ensure that all necessary tools and equipment are on hand, in sufficient supply and in good working order.

ADHESIVES & BOND TESTING

Purfix UltraTech Adhesive is the required adhesive developed specifically for use with Bio Based Resilent. The use of any other adhesive may lead to failure and void the warranty. Do not use Purfix UltraTech Adhesive if the subfloor RH levels exceed 95%. When RH is between 95%-97%, consider Commercialon Premium Sealer. The pH level for should be between 7 and 12. Always refer to the full instructions for adhesive application and use. Bond testing should always be performed to help determine adhesive application working time and proper adhesive coverage. Perform several tests using full size planks or tiles for each test and seal the edge of the flooring with duct tape to prevent adhesive from drying prematurely. Allow a minimum of 72 hours before determining compatibility and bond strength. Always check for complete adhesive transfer on the back of the flooring. Do not proceed with installation if an inadequate bond result is seen. Contact technical support for the next steps. Check for expiration dates on the adhesive bucket and do not use if the shelf life has expired. If you have expired adhesive, contact Engineered Floors Commercial Division Customer Relations for instructions. After opening the bucket, mechanically mix the adhesive thoroughly. This can be done using a drill with a mixing paddle attachment. Mix for several minutes to ensure that the color and consistency of the adhesive are uniform.

Purfix UltraTech Adhesive is white in color. Flooring material should be placed into the adhesive within 30 minutes. Flash time and working time are influenced by substrate porosity and atmospheric conditions, temperature, humidity, and air movement. The higher the temperature, the lower the humidity, and the more porous the substrate, the faster the flash time and the shorter the working time. Apply adhesive using a 1/16" x 1/16" x 1/16" Flat V-notched trowel for Purfix UltraTech adhesive. The Purfix UltraTech adhesive coverage is approximately 125-145 sq. ft. per gallon. Always use new trowels and keep a bucket of water and rags available to keep your trowels clean and free of debris. Replace trowels frequently. Continue to check and replace your trowels when they show wear. This will help in applying the proper amount of adhesive.

Flooring may be installed when the adhesive has set up sufficiently and remains tacky to the touch, usually after 10-25 minutes. Do not let the adhesive flash off before installation. The required bond tests should help dictate the optimal set up time based on the jobsite conditions. Follow manufacturer's recommendations for rolling and/or cross rolling the flooring during installation. Move-In and Use: Normal foot traffic may resume after 24 hours. Avoid heavy traffic and rolling loads for 72 hours. Wet mopping can be done after 1 week. Cleanup and Storage: As you work, immediately remove any adhesive from the flooring using a clean, damp cloth. Immediately clean all tools and equipment before the adhesive cures. Follow the flooring manufacturer's recommendations for cleanup. Use of mineral spirits or other solvents may be needed to remove dried adhesive. Adhesives should be stored in their original container in a cool, dry place and out of direct sunlight according to manufacturer's recommendations. Do not allow the adhesive to freeze. This product is for interior installations only.

INSTALLATION

Installation of flooring implies an understanding of the manufacturer's recommendations and acceptance of all jobsite conditions. This acceptance transfers liability to the professional flooring contractor for workmanship and following the manufacturer's recommended guidelines. Any flooring material found with visible defects or other issues are warranted for material only. No labor costs are covered for flooring materials installed with visible defects or other issues. Immediately contact your local representative or customer service representative should an issue be discovered. The use of non-specified adhesives is not recommended due to the unique composition of Bio Based Resilient Flooring. The flooring manufacturer will not be responsible for any issues or claims arising from, or associated with, the use of non-specified adhesives.

•Carefully clean the surface of all debris and contamination and confirm the subfloor is properly prepared and complies with installation and adhesive requirements before proceeding.

• Follow all preparation details previously covered in this document, as well as the detailed layout drawings provided or agreed upon by the specifier. Use either a guillotine cutter or utility knife to make cuts.

• Calculate and mark out your start lines using a string line, straight edge, and pencil. White chalk lines may be used if all loose powdered chalk is removed by using a HEPA filtered vacuum before applying adhesive. Any loose dust, debris, etc. left on the subfloor during layout marking will act as a contaminant and may cause bond failure. When deciding on the proper layout of the flooring, it is recommended to trim to the edge of the next full plank width when the width is narrower than ¾ of the plank width. Always try to maintain at least ¾ of the total plank width on all perimeter walls, casework, and non-movable objects etc.

• Apply Purfix Adhesive to only one workable area of flooring at a time, planning for the distance of an outstretched arm. Install planks and tiles net fit, without tension and avoiding all gapping.

• After each section has been laid into the adhesive, remove excess adhesive on the surface of the flooring and clean immediately while wet.

Use a wide hand roller to thoroughly press the material into the adhesive. Rub/roll each section down the length and out to each edge forcing the planks or tiles into the adhesive bed initiating a tight bond to the substrate. At the edges and in corners, a hand roller can be used to ensure proper bonding. Lay material consistently as each section of adhesive reaches its open time.

- After the plank or tile has been set with the hand roller, roll once in each direction using a 100-150 lb. (45-68 kg) three-section floor roller. As you proceed across the floor, drop back, and roll each installed section three times. Once finished, roll the entire floor again. Note: The number 1 cause for flooring failures is lack of proper adhesive transfer!
- After installation, do not allow foot traffic for at least 24 hours and do not allow heavy rolling loads for at least 72 hours. Cover with protective material appropriate to prevent any damage from other construction trades. Only use breathable protection products as to allow for the continued curing of flooring and adhesive materials. Keep covered until final acceptance by the Owner.

These installation instructions are intended for the experienced installer adherence to these procedures will result in a quality installation. Any questions concerning these instructions or any special situation encountered should be directed to Engineered Floors Commercial Division Customer Relations Department at 800 241 4586.