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AVA SMPL INSTALLATION AND INITIAL CLEANING INSTRUCTIONS

All instructions and recommendations are based on the most recent information available. These should be followed for an ideal installation. Visit www.avafloor.com or contact AVA Tech Support at 877.861.5292 for the latest information and installation instructions.

General Guidelines

1. The space where flooring is to be installed shall be fully enclosed and the permanent HVAC system shall be operational at 65° - 80° Fahrenheit (18° to 26° Celsius) for 5 days before installation, during installation and for 5 days after installation. The temperature of the space shall be kept at a minimum of 55° Fahrenheit (13° Celsius) continually after installation. *Avoid dramatic and large temperature increases.*
2. AVA recommends acclimation of the SMPL product for 24 hours prior to installation to ensure the product is at equilibrium with the installation environment.
3. SMPL floating floors should be protected from direct sunlight and not exposed to direct sunlight for extended periods of time by use of blinds, drapes or suitable window coverings or be in use in areas of large amounts of direct sunlight exposure
4. Doorways and archways 6 feet or less in width must have a suitable "T" molding installed as control joint to allow for normal product movement between rooms. A minimum of 5/16" gap is to be allowed on either side of the installed track for the molding.
5. Do not use tapping blocks, adjustable spacers (screw type) or other tools common to hardwood and laminate flooring installation to prevent damage to the locking mechanism. A small, 6", piece of AVA SMPL flooring should be used as a tapping block.
6. This product cannot be installed with full spread adhesives.
7. SMPL floating flooring is designed to be installed as a "floating" floor. Do not secure individual planks or tiles to the subfloor with mechanical fasteners or adhesives. Always undercut all doorjamb. Do not install cabinets or kitchen islands on top of floating floors.
8. Use of a small, soft bristle brush to clean the joints prior to locking will ensure that there is no debris which will cause stressing or failure of the joint after interlocking the pieces together.
9. Use care when installing wall moldings and transition strips to not fasten through SMPL floating flooring planks or tiles.
10. On rooms greater than 3600 ft² (334 m²) or runs longer than 65 feet (19 meters) control joints with a suitable T-molding must be installed with a minimum of 5/16" (8mm) gap between the sides of the t-molding.
11. SMPL planks and tiles are best cut in the following ways: guillotine-type hardwood/laminate cutter; a VCT cutter (professional grade); a sabre saw with a fine-tooth wood cutting blade; a 12" power miter saw with a shallow or negative kerf blade, similar or equal to a plastics cutting blade. If you are scoring and snapping SMPL by use of a utility knife, please note it will be necessary to score the LVT layer multiple times to ensure a good break and then shave the SMPL backing to make it smooth and even. This method may also cause the backing to crack or break off in areas close to the score line which will require using a new plank.

**** Improper acclimation of floating luxury vinyl flooring may result in gapping, or buckling of joints which are difficult to engage properly. Improper locking of the mechanism may cause one or more of the following conditions in your flooring: joints to be distressed resulting in a 'peaked' appearance; delamination due to ledging; separation of joints from normal environmental temperature changes; cupping or side joint failures.**

Reference Documents

The latest versions of all listed Standards, Guides and Work Practices shall be used in all cases.

ASTM F 710	Standard Practice for preparing Concrete floors to receive resilient flooring
ASTM F 1482	Standard Practice for Installation and Preparation of Panel Type Underlayment's to Receive Resilient Flooring
ASTM F1869	Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride



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ASTM F 2170	Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs using In Situ Probes
ASTM F2419	Standard Practice for Installation of Thick Poured Gypsum Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring
ASTM F2471	Standard Practice for Installation of Thick Poured Lightweight Cellular Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring
ASTM F2659	Standard Guide for Preliminary Evaluation of Comparative Moisture Condition of Concrete, Gypsum Cement and Other Floor Slabs and Screeds Using a Non-Destructive Electronic Moisture Meter
ASTM F2678	Standard Practice for Preparing Panel Underlayments, Thick Poured Gypsum Concrete Underlayments, Thick Poured Lightweight Cellular Concrete Underlayments, and Concrete Subfloors with Underlayment Patching Compounds to Receive Resilient Flooring
ACI 302	Guide for Concrete Floor and Slab Construction
RFCI	Recommended Work Practices for Removal of Resilient Floor Coverings

SUBFLOOR INFORMATION

Approved Substrates

The following are approved substrates for installation of AVA SMPL Luxury Vinyl Flooring. See the next section for proper testing and substrate preparation prior to installing your AVA floorcovering.

- **All substrates regardless of composition must be smooth and flat to within 3/16" (4.76mm) in 10 feet or achieve an "F32" rating by use of mechanical grinding/sanding or suitable Portland-based level/patch compound.**
- Above, on or below grade concrete without hydrostatic pressure, excess moisture or alkalinity; must be fully cured and dry, free from curing compounds, sealers, etc.
- Above or on grade lightweight concrete, properly prepared and without hydrostatic pressure, excess moisture or alkalinity.
- Above or on grade Gypsum concrete surfaces, properly prepared and sealed, and without hydrostatic pressure, excess moisture or alkalinity.
- APA registered underlayment, sanded face exterior grade with minimum rating of C-C plugged face
- APA registered exterior grade plywood sanded face with ratings as follows: APA A-B, A-C, B-B, B-C, C-C plugged face
- Single layer Sturd-I-Floor rated panels (minimum 23/32" thickness) with sanded face. Check for jobsite damage before using as underlayment if panels were exposed to construction traffic or weather prior to installation.
- APA Rated underlayment veneer panels
- Properly prepared and well bonded existing resilient floor covering
- Cement Terrazzo, Epoxy terrazzo, ceramic tile, marble – must be properly prepared; all grouts are patched with appropriate patching compounds or leveler.
- Certain metal floors – all gaps are patched with appropriate patching compounds or leveler.
- Old adhesive residue- must be properly prepared with embossing leveler
- Radiant heated floors where heat does not exceed 85°F (29°C)
- Acoustical sound control underlayments branded or specifically recommended by Novalis International.

The following are not approved substrates for installing AVA SMPL flooring:

- Foam, rubber, cork or other soft underlay pad
- Rubber, cork or asphalt tiles
- Textured or cushion backed resilient flooring
- "Sleeper" floor systems
- Plywood floors that have been installed directly over a concrete slab
- Luan and mahogany-type plywood panels
- Masonite™ or other hardboard underlayment
- CCA (pressure treated), oil treated or other coated plywood
- CDX or other plywood with knots or open defects



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- Underlayment made of pine or other soft woods
- Hardwood flooring
- Paint, wax, oil, grease, residual adhesive, mold, mildew, and other foreign materials that might prevent floating planks from natural movement
- Other uneven or unstable substrates.

Substrate Preparation

All substrates must be properly prepared and tested according to the following guidelines.

1. Concrete Subfloors

Although AVA SMPL flooring is not susceptible to damage from moisture, excessive subfloor moisture is an ideal breeding ground for mold, mildew and fungus-all of which can contribute to an unhealthy indoor living environment. Use of a suitable vapor barrier is recommended.

- a. Concrete slab construction shall be in accordance to industry standards for specification related to concrete mix design, curing methods and drying times to prevent moisture problems.
- b. On-grade and below-grade slabs should be installed with a suitable vapor retarder directly underneath the concrete slab.
- c. New concrete shall be properly cured and dried prior to the installation of floor covering. Curing agents, surface hardeners and other membranes or compounds shall be mechanically removed immediately after initial cure to allow the slab to properly dry before installation. Approximately 30 days per 1" of slab thickness.
- d. Concrete substrates should be properly prepared according to ASTM F710-11, *Preparing Concrete Floors to Receive Resilient Flooring*.
- e. All concrete substrates, regardless of grade or age of slab, must be properly tested using one of the methods outlined below for warranty to apply. Acceptable test method is the ASTM F 2170 In Situ Relative Humidity. Testing shall be conducted according to the relevant ASTM documentation and instructions of the manufacturer of the testing equipment. Consult AVA Technical support for RH values greater than 80%. Concrete Alkalinity / pH Test shall be conducted in accordance with ASTM standards. Acceptable level of pH in the substrate is 7.

2. Wood Subfloors

- a. All wood substrates shall be prepared according to ASTM F1482-04 *Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring*.
- b. All wood panels for use under AVA SMPL flooring must be smooth, flat, structurally sound and free of deflection.
- c. A combination of wood subfloor and panel underlayment construction shall be a minimum of 1" in total thickness.
- d. There shall be at least 18" of well-ventilated air space beneath all wood subfloors. Crawl spaces shall be insulated and protected by a suitable vapor barrier.
- e. Wood subfloors installed directly on concrete or over "sleeper" joist systems are not acceptable for use under AVA SMPL Flooring.
- f. Panels designed as suitable underlayment shall be at a minimum ¼" in thickness, dimensionally stable, fully sanded face to eliminate grain texture or show through, and have a written manufacturer's warranty and installation instructions.
- g. Panels shall be installed according to manufacturer's instructions regarding stapling pattern, sanding and filling of joints, and acclimation to installed environment.
- h. Novalis will not cover or accept responsibility for joint telegraphing, either as a "ridge" or "valley"; grain or texture telegraphing; discoloration of finished flooring due to materials used for filling of voids and defects in the face of the underlayment
- i. Unacceptable substrates shall be covered using a ¼" or thicker panel underlayment recommended for commercial use. Follow underlayment manufacturer's installation instructions fully.

3. Gypsum and Lightweight Cellular Concrete Substrates

Gypsum and lightweight concrete subfloors and substrates should be in accordance with the listed standards.

- a. Gypsum surfaces shall be in accordance with and properly prepared according to the appropriate ASTM specifications as listed in the above Reference Section.



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- b. Conduct a surface porosity test to ensure that the surface is properly sealed and not weak or excessively dusty.
 - c. Check moisture content of the gypsum substrate via the appropriate method according to the ASTM Standards listed above. Moisture content of the subfloor/substrate shall not exceed the adhesive requirements or 75% RH or 3 lbs./1,000 sqft./24 hrs. MVER. When using the D4263 Test Method no discoloration of the surface should be found.
 - d. All patching compounds shall be recommended for use with gypsum, gypcrete or lightweight cellular concrete surfaces by the patching compound manufacturer. Follow the manufacturer's instructions regarding mixing, use and application.
4. All gypsum surfaces must be properly primed according to the gypsum manufacturer's instructions; or where applicable follow the instructions of the adhesive manufacturer if there is no recommendation from the gypsum manufacturer.
 5. Existing resilient flooring must be single layer only, thoroughly stripped of all wax, floor finish, dirt and other contaminants and firmly bonded to the substrate, flat and smooth with no curling edges or loose seams. Must not be of a cushion back, loose-lay, or perimeter bonded floor.
 6. Old Adhesives
 - a. Adhesive residue shall be properly prepared prior to the installation of AVA SMPL Flooring. It is recommended that mechanical scraping or grinding be used as a primary means of removing old adhesive residue.
 - b. Residues include, but are not limited to carpet, vinyl, VCT, and or wood flooring adhesives.
 - c. Black cutback/asphalt adhesives shall be scraped by hand to remove any loose patches, trowel ridges and puddles so that only a thin residue layer remains. This layer shall then be properly covered using a Portland-based patching compound properly mixed with the manufacturer's recommended latex/acrylic additive.
 - d. Do not use chemical adhesive removers.

WARNING!

DO NOT SAND, DRY SWEEP, BEADBLAST, SHOTBLAST OR USE ANY OTHER MECHANICAL MEANS TO PULVERIZE EXISTING TILE FLOORING, BACKING, LINING FELT, ASPHALTIC "CUT-BACK" OR ANY OTHER ADHESIVES. THESE PRODUCTS MAY CONTAIN 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.

7. Other substrates
 - a. Cement terrazzo, epoxy terrazzo flooring, stained or painted concrete and metal floors may be suitable for installation provided they meet the requirements stated above in Approved Substrates.
 - b. Ceramic, porcelain, marble and granite tiles are suitable and must be properly bonded with intact grout joints and free of cracks or loose tiles. Surface of tile and grout joints should be free from sealers, coatings, dirt and contaminants. Properly prepare the surface of tiles by grinding any high areas and using a suitable Portland-based leveling compound and primer to fill in all low areas. Follow leveling compound manufacturer's recommendations for surface preparation and application of product.
 - c. The following are not suitable substrates for installation of SMPL Flooring: rubber, cork, or asphalt tiles; and any other material covered in the sections above and listed as unsuitable.
 - d. Unsuitable substrates should be covered with an approved ¼" minimum wood underlayment or suitable Portland-based cement leveler or patching compound. Always follow the manufacturer's recommended practices when covering an existing substrate.

Installation and Layout

AVA SMPL floating flooring is designed with an angle/drop mechanism, which is installed differently than the traditional angle/angle installed floating flooring. AVA SMPL flooring requires that the top or long sides be installed first by engaging the joint at a shallow angle (25°) and then slide the piece to line up the short or right side drop



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lock mechanism. The end joints with the FD drop mechanism should be carefully placed with the top side lightly touching the adjoining tile/plank. After engaging the top/long side joint at a shallow angle, the end/side joint can be firmly pressed into place until it 'clicks'. The end joints must be properly aligned vertically so the joint can engage without interference from the adjoining plank. Running a thumb/finger along the joint will help to ensure the vertical alignment.

NOTE: The FD drop lock joints cannot be 'lifted' or angled apart when removing or repositioning a plank or tile. To remove a plank or tile, first disengage the top/long angle joint by lifting at a slight angle while pulling the complete rows away from each other. Then simply 'slide' the drop joint apart along the floor. Failure to slide this joint apart will damage the drop lock mechanism and prevent proper re-installation of the affected plank or tile.

1. Layout

- a. Install flooring perpendicular to direct sunlight sources, including large windows, doors, etc.
- b. It is important to balance the layout of the plank and tile format. Proper planning and layout will prevent narrow piece widths at wall junctures. Determine layout to prevent having less than a half the width or very short length pieces.
- c. Determine the center of the room by measuring each end wall and marking the center of the wall. Chalk a line across the points and measure to determine the center point. At a right angle to the chalk line, using the center point, chalk another line out to the other walls.
- d. Be sure to allow for a 5/16" spacing along all walls when determining your starting plank width. On rooms greater than 3600 ft² (334 m²) or runs longer than 65 linear feet (19 meters) control joints with a suitable T-molding must be installed with a minimum of 5/16" (8mm) gap between the sides of the t-molding.
- e. Dry lay a section of plank from the center line to one wall to determine that the pattern is centered and fit. Border cuts should be measured and should not be less than half the width of a plank. If the cut row falls under these conditions, adjust the first row at the center line to make the centerline match the centerline of the row of planks.

2. Installing SMPL Floating vinyl flooring

- a. Determine if the starter row will need to be cut from the Layout instructions above. It will be necessary to cut off the unsupported tongue on the edges placed against the wall so that a clean, solid edge is toward the wall.
- b. A small, soft bristle brush is recommended to be used to clean the joints of each piece before attempting to lock them together.
- c. From the top, left corner of the room put the first plank in place so both the head and side seam grooves are exposed. Planks are to be installed from left to right. Cut off the tongue on the long side of each piece in the first row with a utility knife.
- d. Install the second piece in the first row by laying the short-end tongue onto the previously installed piece short-end groove. Use your thumb to ensure that the joints are vertically aligned and one plank is not lying on top of or away from the other. This is critical to the joint locking properly.
- e. Fasten the piece together by firmly pressing down with your thumb along the seam to align the planks vertically. Use of a soft, white No. 2 rubber mallet is necessary to vertically engage the joint.
- f. Continue in this manner for the rest of the first row. The last piece in the row should be cut to length while maintaining the 5/16" (8mm) expansion space along the perimeter of the room.
- g. Cut a piece in half of the lengths to start the second row or use the cutoff from the previous row, keeping in mind the length requirements above. Install the first piece in the second row by inserting the long side tongue into the groove of the piece in the first row at a low angle (25°) to the installed piece. Then firmly lower the plank while maintaining a slight pressure towards the installed piece. The pieces should fit snugly together and lay flat. **Ensure that expansion space is kept along this wall by using spacers or blocks.**
- h. To install the remaining planks in the second row, first align the long edge tongue into the groove of the previous row at a shallow angle. Slide the piece to the left until the piece meets the previously installed piece.
- i. Firmly lower the piece while maintaining a slight pressure towards the installed piece. The pieces should fit snugly together and lay flat. Engage the short edge joint as stated above.



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- j. Work across the length of the room installing pieces in the second row. It is critical to keep these first two rows straight and square, as they are the “foundation” for the rest of the installation. Check for squareness and straightness often while installing the floor.
- k. Use of several 5/16” (8mm) spacer blocks along the first wall will ensure the proper spacing is achieved and that floor does not ‘walk’ back towards the wall during installation.
- l. Continue installing flooring, being certain to maintain a random appearance (planks) or the pattern (tiles) and offset end seams by at least 6”. Maintain a 5/16” (8mm) expansion gap at all fixed vertical surfaces. Check to be certain all planks are fully engaged; if slight gapping is noticed or the pieces will not lay flat, simply disengage the long/top side joint and then carefully slide the short/end joint apart. **Do not pull up on this joint as it will damage the locking mechanism!** Reinstall the piece.

After Installation

- 1. Be sure planks / tiles are set, flat and have tight edges.
- 2. In the event that the AVA SMPL flooring is not the last portion of the construction project, the floor must be protected from construction traffic and damage. Utilize a reinforced fiber protective board or a heavy kraft paper (min. 60 lbs.) and cover the floor.
- 3. Initial maintenance
 - a. Following installation thoroughly clean the floor using a neutral pH cleaner.
 - b. If necessary, a slow (175 rpm) buffer can be utilized with a white, non-abrasive pad to remove heavier deposits.
 - c. Rinse the floor thoroughly and allow to dry.
- 3. Daily and weekly maintenance
 - a. Sweep, vacuum or dust mop the floor as needed to remove dust loose dirt and grit. In high traffic areas this may be a daily or twice daily procedure. Use only vacuums that do not have bristle beater bars or metal heads.
 - b. Clean liquid spills immediately to prevent the possibility of stains, slips or falls.
 - c. Damp mop the floor as needed to remove dirt and stains. Use a neutral pH cleaner and a red pad if needed to remove ground in dirt. Soft bristle brushes can also be used on flooring with embossed surfaces.
- 4. Preventative steps
 - a. Use mats at all entry areas to keep dirt, sand and water off of the floor. Clean the mats on a regular basis. If mats are placed directly on top of the floor, be sure the mats have a non-staining back. Rubber mats are also not recommended over AVA flooring products.
 - b. Furniture shall have protective glides of at least 1” in diameter to minimize the chance of indentations or scratching to the surface of the floor. Do not use narrow chair glides! Felt pads are also excellent protection for the floor for furniture that will be frequently moved directly across the floor.
 - c. Areas with caster chairs must have protective mats under the chairs.
 - d. Do not move heavy furniture, appliances or fixtures directly across the floor. Use protective boards or appropriate furniture movers designed for use over hard surface flooring.
 - e. Protect the floor from direct sunlight by using appropriate window coverings.
 - f. Use chair mats at desks to protect the floor from damage due to chair legs or casters.
 - g. Periodically clean caster wheels and check for wheels that may be broken or no longer rotating. Replace damaged wheels immediately.
 - h. Avoid use of metal or razor scrapers to remove dirt, residues or other marks from flooring. This will damage the protective wear layer of the vinyl flooring.