

INSTALLATION GUIDELINES FOR RIGID CORE FLOORING (2G)

IT IS THE RESPONSIBILITY OF THE INSTALLER TO FOLLOW THE INSTALLATION GUIDELINES FOR WARRANTY COVERAGE TO APPLY.

General Guidelines

1. The space where flooring is to be installed shall be fully enclosed and the permanent HVAC system shall be operational at 55° - 85° Fahrenheit (12.78 to 29.4 Celsius) for 5 days before installation, during installation and for the life of the installation. Note: Maintaining an optimal temperature of 70° Fahrenheit and relative humidity of 35% – 55% is highly recommended. *Avoid dramatic and large temperature increases and/or decreases.*
2. Acclimation of our rigid core flooring is required for 24 hours prior to installation to ensure the product is at equilibrium with the installation environment.
3. Our rigid core floating floors can withstand temperature fluctuations as low as 14°F (-10° Celsius) and as high as 140°F (60° Celsius) for short periods (1 to 2 Days), but as a general rule the ambient conditions should be maintained at 55° - 85° Fahrenheit (12.78 to 29.4 Celsius) and 35% - 55% relative humidity. In addition, the flooring should be protected from direct sunlight and not exposed to direct sunlight for extended periods by use of blinds, drapes, or suitable window coverings.
4. Doorways and archways 6 feet or less in width should have a suitable “T” molding installed as a 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 and/or the T mold post.
5. **“IMPORTANT” along with the written step by step installation process and procedures as provided in these guidelines, we encourage you to visit valinge.com which provides video illustration for the proper method of engaging the Valinge 2G angle angle tongue and groove interlocking system.**
6. **This product cannot be installed with full spread adhesives.**
7. Our rigid core flooring is designed to be installed as a “floating” floor. Do not secure individual planks to the subfloor with mechanical fasteners or adhesives. Always undercut door jambs. **Do not install cabinets, kitchen islands, wall units and/or pool tables on top of our rigid core floating floors as doing so can/will result in impingement of the flooring which can/will result in cupping, peaking, joint breakage, buckling and/or joint separation failure which is not covered under any/all applicable warranty coverage offered with this product.**
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 tongue and groove system.
9. Use care when installing wall moldings and transition strips to not fasten through flooring planks as this can/will cause impingement of the floor, which can/will cause the floor to buckle and/or the joints to separate. In addition, do not apply caulking between the bottom of the base board and/or base shoe trim and the surface of the floor as this can/will prevent the floor from normal expansion or contraction which can/will result in cupping, buckling and/or joint separation due to compression and/or contraction related stresses.
10. The flooring planks are best cut in the following ways: A VCT or laminate cutter; a saber 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. As for rip cutting, use a table saw with a cutting blade diameter of 10 to 12”. Note: The cutting teeth of the blade should be comprised of carbide and should have a minimum of 90 cutting teeth.

SUBFLOOR INFORMATION

Approved Substrates

The following are approved substrates for installation of our rigid core flooring. See the next section for proper testing and substrate preparation prior to installing your rigid core floorcovering.

- **All substrates regardless of composition must be smooth and flat to within 3/16" (4.75mm) or achieve an "F32" rating by use of mechanical grinding/sanding or suitable Portland cement-based patching and leveling compounds.**
- APA registered underlayment, sanded face exterior grade with minimum rating of C-C plugged face.
- APA registered exterior grade plywood sanded face C-C plugged, sanded face or better.
- Single layer Sturd-I-Floor rated panels (minimum 23/32" thickness) with sanded face.
- APA rated OSB or Particle Board, 3/4" minimum thickness if single layer. Must be properly fastened, free of moisture and visible defects. Ensure proper gapping at seams and no ledging exists.
- 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).

The following are not approved substrates for installing rigid core flooring:

- Foam, rubber, cork, or other soft underlay pad
- 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
- 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 loose-lay planks and tiles 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
 - Use of a suitable vapor barrier (i.e., 6mil poly sheeting) is required.*
 - a. Concrete slab construction shall be in accordance with 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 the method 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. **Note:** Our rigid core flooring CANNOT be installed over the surface of a concrete slab where the RH Value is greater than 80%.
 - f. 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 Underlayment's to Receive Resilient Flooring*.
 - b. All wood panels for use under our rigid core 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 (i.e., 1 ½ vents per each 100 SF of crawl space area) beneath all wood subfloors. Crawl spaces shall be insulated and protected by a suitable vapor barrier consisting of 6 mil "black" polyethylene sheeting overlapping the seams a minimum of 12" followed by sealing the seams completely using 3" wide packing tape. **Note:** Make sure to run the poly sheeting a minimum of 4" to 6" up the stem walls.
 - e. Wood subfloors installed directly on concrete or over "sleeper" joist systems are **not** acceptable for use under our rigid core 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 and/or industry standards regarding stapling pattern, sanding and filling of joints, and acclimation to installed environment.
 - h. Manufacturer 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 and/or industry standards 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. Conduct a surface porosity test to ensure that the surface is properly sealed.
 - b. Check moisture content of the gypsum substrate via the appropriate method according to the ASTM Standard. The moisture content of the substrate shall not exceed 80%RH.
 - c. All patching compounds shall be recommended for use with gypsum or lightweight cellular concrete surfaces by the patching compound manufacturer. Follow the manufacturer's instructions regarding mixing, use and application.
4. Existing resilient flooring must be single layer only, be 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.
5. Old Adhesives
- a. Adhesive residue shall be properly prepared prior to the installation of our rigid core 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. **NOTE: SEE THE BELOW WARNING!!!**
 - 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.

6. Other substrates

1. Cement terrazzo, epoxy terrazzo flooring, stained or painted concrete and metal floors may be suitable for installation. However, most will need to be prepared with a suitable Portland-based cement patching compound, see manufacturer's recommendations for use and preparation of subfloor.
2. 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.

3. The following are not suitable substrates for installation of our rigid core flooring: rubber, cork, or asphalt tiles; and any other material covered in the sections above and listed as unsuitable.
4. Unsuitable substrates should be covered with an approved ¼" 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

Our rigid core flooring is designed with a Valinge 2G tongue and groove interlocking mechanism. Please refer to and follow the installation process and procedures as illustrated in the installation video provided by Valinge. **Please note that the video guidelines are for an angle floating method of installation which must be followed. Installing the floor using any other method of engaging the tongue and groove locking mechanism can/will result in failure of said locking system (i.e., joint separation, joint breakage, compression stress, end joint kinking and/or ledging) which is not covered under ANY/ALL applicable warranties offered with this product.**

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 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 3,500 ft² (325 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.
- e. Installation of the product must start from the left side to the right of the room. Tongue side facing the wall.
- f. Install the second plank in the row by angling the end tongue into the end groove of the first plank. Be careful not to bend the corner of the plank. Maintain an expansion gap of approximately 5/16" or 8mm from the wall. Start the second row with cutting a plank to the wished length. Keep in mind that the plank must not be shorter than 6" or 150mm to receive the best-looking appearance.
- g. Install the first plank in the second row by inserting the long side tongue into the groove of the plank in the first row. This is best done with a low angle of the plank. Install the second plank in the second row by inserting the short end tongue into the previously installed plank groove. Align the plank so that the long side tongue tip is positioned just over the groove lip of the plank in the first row. Working from the end seam, at a low angle, insert the long tongue into the groove of the adjoining plank. **Note:** Very little force is required to seat the tongue into the groove.
- h. Work across the length of the room installing planks along the wall in the first row and then aligning the planks in the second row. It is critical to keep these two rows straight and square as they are the "foundation" for the rest of the installation. Check squareness and straightness often.
- i. Cut the last plank in the first row and leave an expansion gap of around 5/16" or 8mm.

- j. Planks may be cut with a utility knife using the “score and snap” technique or one of the above-mentioned recommended cutting methods. The leftover of this plank may be used to start the third row if it is minimum 6” or 150mm long. Continue installing planks and make sure to achieve a random appearance with end pieces of minimum 6” or 150mm. Check that all planks are fully engaged; if a slight gapping is noted, the gap can be tapped together by using a tapping block made to fit the profile of the Valinge 2G locking mechanism and/or a piece of the flooring approximately 10” long works well when used as a tapping block to close tiny gaps that may exist.
- k. When fitting under door casings, etc., the flexibility and convenient connection of Click Luxury Vinyl Plank becomes evident. If necessary, a flat pull bar may be used to assist in locking the planks.

Three Season Rooms

Our rigid core flooring is an ideal choice for installations in 3 season environments where the ambient conditions may not be controlled for short periods (1 to 2 Days). In fact, our rigid core flooring can withstand temperatures as low as 14°F and highs up to 140° F for short periods (1 to 2 Days). However, it is important to note that prior to beginning the installation, the flooring must be properly acclimated to a controlled environment (i.e., 55°F to 85°F) for a minimum of 24 hrs. Failure to comply with these requirements can/will result in loss of warranty coverage.

After Installation

1. Be sure planks are set, flat, and have tight edges.
2. If the plank 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. **Note:** When taping the paper together, **NEVER** tape directly to the floor’s surface, but rather tape the paper to the paper using 3M 2090 Blue masking tape.
 - a. Clean the floor using a neutral pH cleaner **SEE RECOMMENDED CLEANERS UNDER MAINTENANCE.**
 - 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 with distilled water 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 white 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 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 for our LVP/WPC flooring products.
 - b. Furniture shall have protective glides made from felt or indoor/outdoor carpet (which can be purchased at your local big box store) 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. Do not move heavy furniture, appliances, or fixtures directly across the floor. Use protective boards or appropriate furniture movers designed for use over hard and/or resilient surface flooring.
- d. Protect the floor from direct sunlight by using appropriate window coverings.
- e. Use chair mats (with approved underlayment pad) at desks to protect the floor from damage due to chair legs or casters.
- f. Periodically clean caster wheels and check for wheels that may be broken or no longer rotating. Replace damaged wheels immediately.
- g. 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 flooring.

MAINTAINING AND PROTECTING YOUR FLOOR

- As with any fine floor covering, care should be taken when moving heavy furniture or appliances back into the room. Use wood panels to protect the floor when rolling heavy appliances back into place.
- Proper floor protectors must be used under any furniture which is regularly moved, or which is heavy and may dent the floor.
- Non staining, non-rubber backed protective mats must be used under rolling office chairs, and any rolling furniture/carts need to have wide (non-plastic) flat wheels.
- Do not use rubber back area rugs as the rubber may contain chemicals such as sulfur that can/will discolor the floor. Instead, we recommend rug underlayment pads specifically designed for use on LVP/WPC types of flooring, such as rug pads from [rugpadusa.com](https://www.rugpadusa.com).
- Protective walk off mats must be used at all exterior doors.
- Oil and petroleum-based driveways can stain vinyl floors. Do not track petroleum-based products onto our rigid core flooring.
- Sweep or vacuum the floor regularly to remove dirt/grit. Do not use a vacuum with a revolving beater bar.
- Our rigid core flooring should be regularly cleaned with a neutral pH cleaner such as Bona Professional Series Stone, Tile & Laminate Cleaner, Mannington Rinse-Free Cleaner, Rejuvenate Luxury Vinyl Floor Cleaner and/or Zep Neutral pH Floor Cleaner. Follow manufactures instruction. **Note: Using a cleaner other than a neutral pH cleaner can/will result in irreversible damage to the floors surface, which can/will void ALL applicable warranties.**
- Do not use steam cleaners of any kind to steam clean the floor as it can/will cause permanent damage to the floors surface.