



INSTALLATION INSTRUCTIONS

PROCORE® PLUS INSTALLATION INSTRUCTIONS

Quick Reference:

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| Concrete moisture requirement | For all on and below grade concrete, use a 6-mil (0.006-in.) Polyethylene (PE) sheet or equivalent |
| Flatness tolerance | < 1/8-in. over 6-ft. and 1/16-in. over 1-ft. in all directions |
| Installation temperature | Between 60°F to 80°F (16°C to 27°C) |
| Optimal service temperature | Between 40°F to 90°F (4°C to 32°C) |
| Additional acoustic underlayment | Not required or recommended |
| Expansion gap (entire perimeter) | 1/4-in. ≤ 50-ft., and 1/2-in. between 50 – 85-ft. lengths or widths |
| Expansion joints (large areas) | Only required if > 85-ft. in length or width |
| 3-IN-1 doorway transition | Not usually required |
| 3-Season rooms | Acceptable (but see “Expansion Gap”) |
| Pet stain warranty | Yes, but immediately clean up when discovered |

General Information & Limitations: Please watch the installation videos available at Lowe.com. This flooring has a high-density core (HDC), designed to be installed indoors only, as a “floating floor” for residential applications. The optimal operating temperature is between 40°F to 90°F (4°C to 32°C). Avoid prolonged exposure to direct sunlight or other heat sources where temperatures will exceed 90°F (32°C), as damage may occur. This product is not suitable for heavy rolling loads. Rolling chairs with soft or W-type casters and a maximum rolling weight of 250 lbs. are acceptable, provided that a polycarbonate chair mat is used to protect the flooring in rolling chair areas. Do not secure flooring or furniture to the subfloor with mechanical fasteners or adhesives. Do not install cabinets, kitchen islands, or other non-movable furniture on top of this floor covering. Contact the technical department at 1-888-509-3438 or techsupport@novalis-intl.com for assistance. Copies of ASTM documents are available for purchase at www.astm.org.

Recommended Tool List: Appropriate Personal Protective Equipment (PPE) including safety glasses, gloves and suitable dust mask. Appropriate tools to prepare the substrate, Hepa filtered vacuum, 6-ft. and 1-ft. straight edge or level, two quarters (U.S. coins), tape measure, pencil, speed square, utility knife with blades, 1-lb. (~ 16-oz.) rubber or soft faced dead blow hammer (preferred) or rubber mallet, chalk-line, pull-bar, Oscillating Multi-Tool or hand saw (door jambs), wedge spacers or similar, jigsaw with carbide blades, knee pads. If required, use a super-glue liquid adhesive for any small pieces.

Warning: All local, state, and federal regulations must be followed; this includes the removal of in-place asbestos (floor covering and adhesive) and any lead-containing material. The Occupational Safety and Health Administration (OSHA) has exposure limits for people exposed to respirable crystalline silica; this requirement must be followed. Do not use solvent or citrus-based adhesive removers. When appropriate, follow the Resilient Floor Covering Institute’s (RFCI) Recommended Work Practice for Removal of Existing Floor Covering and Adhesive. Always wear safety glasses and use respiratory protection or other safeguards to avoid inhaling any dust. The label, installation, and maintenance instructions along with the technical data sheet, limited warranty and any appropriate Safety Data Sheet (SDS) of all products must be read, understood, and followed before installation commences. If the substrate or subfloor fails for any reason, then the floor covering limited warranty is void.

Do not leave spills unattended - wipe up promptly, and allow the floor covering to dry before trafficking. Use bathmats and install safety handrails where this floor covering is used next to wet or barefoot areas, like showers and baths.

Documentation: Record and file the measured and observed site conditions and test results, including all photographs and corrective measures. Maintaining this documentation, along with the original invoice and any labor receipts throughout the warranty period, is recommended, as this will be required in the unlikely event of a claim.

Site Conditions: The prepared installation area must be fully enclosed and weather tight. During the installation, any direct sunlight should be blocked using blinds, drapes or other protection. The ambient temperature during installation must be > 60°F (16°C), with a recommended maximum of 80°F (27°C).

Note: When installing at temperatures > 80°F (27°C), the size of an expansion gap will increase when the floor covering is cooled.

Flatness: Check all substrates for flatness prior to installation. The maximum acceptable tolerance is < 1/8-in. gap (2 x US quarters) over 6-ft. and ≤ 1/16-in. gap (1 x US quarter) over 1-ft. Make any necessary adjustments to the substrate before installation. Dormant cracks, saw cut joints and grout lines < 1/8-in. wide or deep are acceptable – all others must be cleaned of all dirt and debris, then filled using a suitable commercial grade patching or repair compound, following the product instructions.

Concrete Subfloors: All concrete must be free of contaminants and structurally sound. If required, smooth the surface using a suitable, moisture-resistant commercial grade leveling or patching compound, following the product instructions. Do not install if hydrostatic pressure is visible, present or suspected. If a chemical adhesive remover has been used, contact the technical department.

For all on and below grade concrete slabs, test the surface to confirm it is absorbent (porous), following the ASTM F3191 Standard Practice for Field Determination of Substrate Water Absorption (Porosity) for Substrates to Receive Resilient Flooring. The water droplets placed on the substrate must be absorbed for it to be considered absorbent. If required, the concrete can be made porous by mechanical methods, such as diamond grinding, a DiamoBrush buffer attachment, shotblasting or similar.

Concrete Moisture: For all on and below grade concrete slabs, use a ≥ 6 -mil thick polyethylene (PE) sheet, available at Lowe's. Sheeting must be installed over the entire area and extend at least 2-in. up the walls. All seams must be overlapped and taped according to the product instructions. The liability and warranty for any product's performance remains with its manufacturer.

Wood Subfloors: All wooden subfloors and substrates must be dry and in compliance with the moisture content percent (MC-%) for your region. Regional values are freely available by searching "moisture map of wood" images. Test using a non-destructive electronic moisture meter, following the product instructions.

The subfloor must comply with local building codes, have at least 18-in. of well-ventilated air space below and have a suitable vapor retarder to isolate the subfloor from ground cover and outdoor conditions. Wood subfloors must have a total thickness of at least 1-in. Sleepers must not make direct contact with concrete or earth. If necessary, install an underlayment grade plywood with a minimum thickness of 1/4-in. on the surface. The underlayment must be installed in the opposite direction to the subfloor, following ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring.

Note: plywood is a water-sensitive subfloor that may become damaged or deformed by topical liquids. To protect wood subfloors from topical water exposure, follow the Wet Area Guidelines below.

Additional Acoustic Underlayments: Additional acoustic underlayments are not recommended or required. However, should one be used, ensure a polycarbonate chair mat is used in all rolling chair areas. Do not use additional acoustic underlayments in any commercial areas.

Unsuitable Subfloors: These include but are not limited to: any floating or loose floor coverings, hardwood, carpet, cushion vinyl, rubber, cork, foam, asphalt tile, any additional acoustic underlayment, any substrate with visible mold, mildew, or fungi and any substrate in wet areas, such as inside showers and saunas. Do not install directly over any adhesive or adhesive residue of any kind. Do not install directly over radiant heated substrate or in recreation vehicles, campers or boats.

Note: Existing hardwood floor coverings will swell when exposed to moisture: vinyl floor covering may restrict the movement of moisture in hardwood, which may result in flooring failure, especially when installed on or below grade. Some hardwood floor coverings may also discolor vinyl floor covering, which is excluded from warranty coverage. By electing to install over any existing floor covering releases the manufacturer from any responsibility regarding the suitability and continued performance of that product, including any resulting effect on the new floor covering, such as indentations and damaged locking mechanisms.

Other Subfloors/Substrates: These may be acceptable. However, they must be and remain dry, without contaminants and be structurally sound.

Wet Area Requirements: Some subfloors, such as plywood, may be sensitive to and damaged or deformed by topical liquids, such as water, pet urine and spills. While ProCore Plus is a waterproof product, water-sensitive subfloors may require additional protection to prevent water exposure. When installing floor covering in wet areas, ensure that bathmats or similar are used where appropriate to decrease the amount of water that can collect on the surface. Any and all spills should be cleaned up immediately after discovering them and within 8 hours. Subfloor flatness is critical to preventing water migration through seams that may flex or peak due to foot traffic and subfloor deflection - be sure to check flatness and make all necessary adjustments prior to installing.

Water-sensitive substrate must have a ≥ 6 -mil thick polyethylene (PE) sheet (available at Lowe's) installed over the entire area and extend at least 2-in. up the walls. All seams must be overlapped and taped according to the product instructions. In addition, the area must be separated from all other rooms using a suitable water-resistant t-molding. Following flooring installation, the plastic sheet must be trimmed flush with the surface of the subfloor. Prior to installing wall-base or molding, the required perimeter expansion gap must be filled with a 100% silicone caulk, including the wet area side of all t-moldings. Additionally, all door jambs, plumbing and vertical surfaces that won't have wall-base or molding installed must be sealed with 100% silicone caulk. Once the entire perimeter has been filled or sealed, water-resistant wall-base, moldings or other accessories may be installed. Apply a bead of silicone caulk to the parts of the wall-base or moldings that will make contact with the surface of the flooring. Ensure all wall base and moldings are attached to the subfloor, wall or wall-base without compression, to allow movement and cleanup any remaining silicone immediately. Do not anchor wall-base or moldings into or through the floor covering.

Expansion Gap: If the length or width of the installation area is ≤ 50 -ft., an expansion gap of at least 1/4-in. must be created around the entire perimeter. If the overall length or width is between 50 - 85-ft., then the gap must be increased to 1/2-in. around the entire perimeter. A maximum of 85-ft. in length or width must not be exceeded. If required, use a suitable trim molding covering the edges by 1/8-in. and allowing a 1/2-in. expansion gap.

For three-season rooms, a gap of at least 1/2-in. around the entire perimeter is required. In addition, the area must be separated from all other rooms using a suitable trim molding. The maximum of 30-ft. in length or width must not be exceeded.

Note: Areas with very heavy furniture \geq 800-lb. (363-kg) must be isolated from the rest of the installation with a compatible t-molding and have \geq 1/2-in. expansion gap.

General Preparation: It is recommended to remove all wall-base before flooring installation. Alternately, a quarter round molding (fixed to the wall or wall-base only) that covers both the required expansion gap and at least 1/8-in. of the floor covering may be installed. Undercut all wooden door jambs and the first in. of any remaining wall-base (later covered with molding) with an Oscillating Multi-Tool or hand saw - the height must be the thickness of the floor covering plus 1/64-in., which allows the floor covering to expand and contract freely, out of sight, with temperature fluctuations (see figure 1). Steel door jambs should be pattern-scribed, leaving the required expansion gap. Use a color-coordinated 100% silicone to fill the void. Clean the entire area to be installed using a HEPA-filtered vacuum.

Before beginning, check and make sure the lot numbers on the packaging match and mix the floor covering from several boxes to ensure a random appearance. During the installation, inspect for visible defects, including any damage, gloss, color or shade variations, dirt and debris in the locking mechanism (remove using a soft brush), as installing it assumes full responsibility. If you have any concerns, do not install and immediately contact the technical department.

Layout: Follow the design or drawings provided or agreed upon by the designer, architect, or end-user. The end joint layout for all planks should be random - make sure joints are not "stair stepped". Failure to randomize end joints could weaken the integrity of the joint system, which may lead to failure. All planks must be at least 8-in. in length and all end seams must staggered by \geq 8-in. Tiles must be installed in a brick-bond pattern, offset by 1/2 or 1/3 of the plank.

Cutting: To cut the floor covering, measure and mark the surface with a pencil, then carefully score the surface a few times on the mark using a sharp utility knife along the side of a speed square (see figure 2). Snap the plank downwards and complete by cutting the backing from underneath (see figure 3). For complicated cuts, such as door jambs, it is recommended to use a jigsaw with a carbide blade following the product safety instructions.

Installation: Clean the entire area to be installed twice using a HEPA-filtered vacuum. Determine the best wall to start installation on - typically this would be the longest straight wall with a doorway (if present). Measure the width of the room and, allowing for two expansion gaps, calculate the width of your last row. If it is less than half the width of the floor covering, or if a balanced design is required, than reduce the width of the first row accordingly. Use a chalk-line to mark the outside edge of the first row on the substrate. If needed, trim the first row (the side without the extended locking mechanism) to fit, accounting for the expansion gap (see figure 2).

First Row (slide): At the left corner of the starting wall, position the first tile or plank flush with the walls. Use the side and end without the extended locking mechanism against the walls. Place wedge spacers between the floor covering and wall to maintain the required expansion gap around the entire perimeter (see figure 4). Before connecting the second piece, lay it flat on the substrate, adjacent to the first row and lined up with the end of the previous piece. Then, while keeping the joint perfectly in line, slide the second plank into the first, locking the mechanism together (see figure 5). Complete the first row using this method. If there is a doorway, measure, mark and cut the flooring to make sure the cut edge will be located underneath the door jamb and frame while maintaining the required expansion gap. A jigsaw should be used for complicated cuts like these. Keeping the installation straight is critical, so check the first row using a chalk line or similar and, as needed, adjust and reinforce the row by adding more wedge spacers. The acceptable straightness tolerance is within 1/16-in. for lengths over 20-ft. or 1/32 in. for lengths under 20-ft. Complete the following rows starting with a cut piece, such as a piece from a previous row. Install the side joints before the end joints as instructed under "Side Joints" and "End Joints".

Side Joints (angle-angle): Starting at the left corner, place the side without the extended locking mechanism into the side of the previously installed row at a \sim 25° angle (see figure 6). Make sure the joint is seated properly, then slide the plank or tile into position (see figure 7). The end joint must line up perfectly. Lay the tile or plank flat and complete the end joint.

End Joints (drop-lock): Always check the alignment of the end joint and adjust if necessary. Lock the joint into place by lightly tap along the high side, starting from the "T", using a 1-lb. (\sim 16-oz.) soft faced dead blow hammer or rubber mallet (see figure 8). Keep the striking head flat with the floor covering and tap until perfectly flush. If the locking mechanism does not line up properly, then check and adjust the straightness as necessary.

Pro-Tips: Do not hit the locking mechanism directly with any hammer, tapping block or pull bar (except the last row) - doing so will damage the locking mechanism and may result in peaking, gapping or broken joints. If required, use a \sim 6-in. piece of scrap floor covering, seated in the locking mechanism, to lightly tap and close any joints.

If you need to install small cuts of floor covering that are $<$ 3-in. in length or width, place a thin bead of liquid super-glue on the previously installed locking mechanism just before installing. This will ensure the pieces remain locked together during use. Do not get the adhesive on the surface - coverage will be \sim 30 ft. per oz.

After the first five or six rows are completed, turn around and continue installing, working on top of the installed material. This will allow the side joints to be pulled together rather than pushed together, which will make the installation even easier.

If you need to disengage the end joints for any reason, first unlock the side joints by lifting the outside edge of the row to \sim 25° and disconnect the entire row. Make sure all pieces are lying flat and are properly engaged (tap to engage, if required), then simply slide

them apart. If they are angled or pulled upwards, the joint will break.

Completion: If used, plastic sheeting must be trimmed flush with the surface of the floor covering. If installed in a wet area, plastic sheeting must be trimmed flush with the subfloor. When installing in wet areas, ensure the expansion gap and all vertical surfaces are filled or sealed with a 100% silicone caulk and ensure all wall-base and moldings are water-resistant, following to the Wet Area Guidelines. Install all necessary wall-base and/or moldings and ensure they are anchored to the substrate, wall or wall-base without compression, to allow movement. Do not anchor wall-base or moldings into or through the floor covering.

Protection: If required, protect the clean floor covering from other trades or heavy loads using ½-in. plywood or similar and tape all seams. For light traffic, use Ram board or similar and tape all seams. For furniture, use only polyurethane, silicon or felt glides (replaced > 3-times a year), keeping them clean and grit-free – all glides should be ≥ 1-in.², especially on heavy furniture. Use protective polycarbonate chair mats designed for resilient flooring underneath rolling chairs or soft “W-type” wheels. Use non-rubber-backed entrance matting at all outdoor entrances, as this will improve air quality and reduce maintenance. Do not drag heavy or sharp objects directly across the surface - use hard surface “sliders” (available at Lowe’s). For areas that may be subjected to standing water on the surface, such as bathrooms with a bath or shower, the perimeter of the installation must be properly sealed using a 100% silicon caulk to prevent water from getting beneath the flooring. To avoid excessive fading or discoloration from direct sunlight exposure, use appropriate window treatments, an effective UV/IR film or Low-E glass windows. Take photographs and have any required documentation signed and filed following completion.

PROCORE® 3-IN-1 TRIM MOLDING

General Information: If the overall length of the area is over 85-ft. in either direction, if temperatures are expected to exceed 90°F (32°C), like in 3-season rooms, or if a transition is desired, a 3-In-1 trim molding should be installed. 3-in-1 trim moldings are color-coordinated and available at Lowe’s.

Note: Colors and patterns that have a high color variance won’t match perfectly.

INSTALLATION INSTRUCTION FIGURES

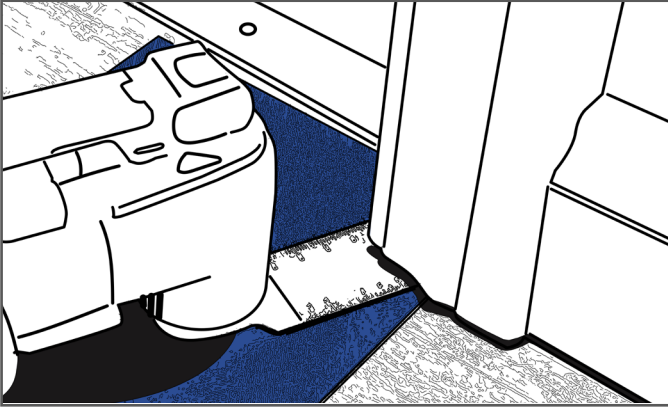


Figure 1 - General Prep - Undercut Door Jamb

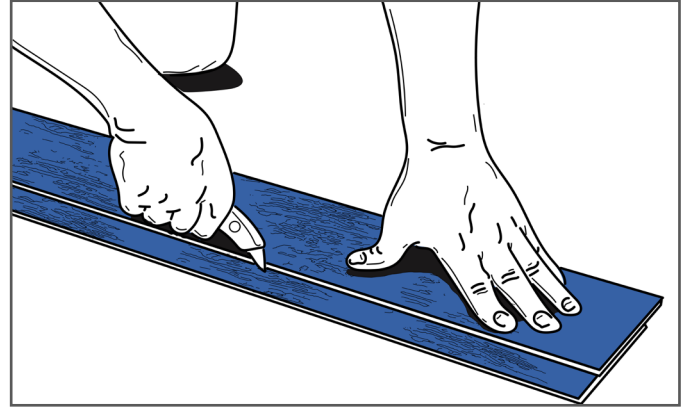


Figure 2 - Cutting - Score & Trim Plank

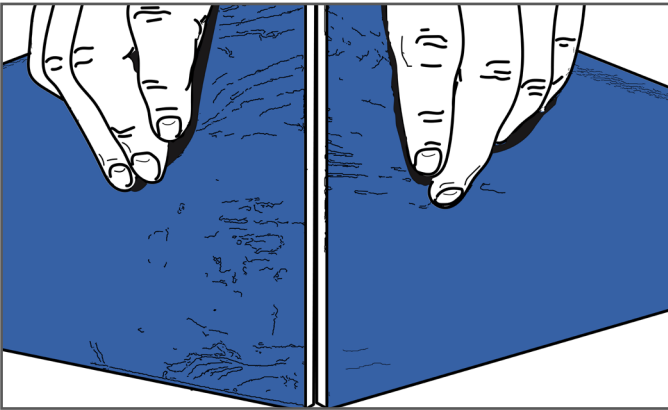


Figure 3 - Cutting - Snap Plank After Scoring

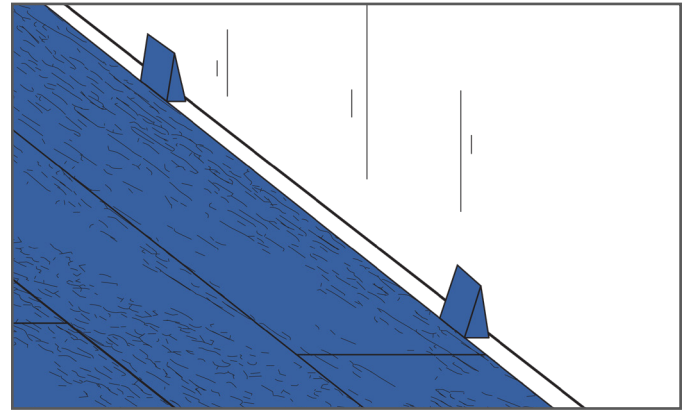


Figure 4 - First Row - Place Spacers In Perimeter Gap

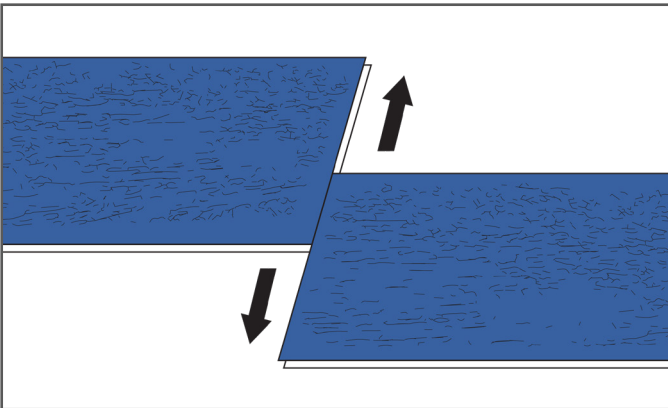


Figure 5 - First Row - Slide Planks Together

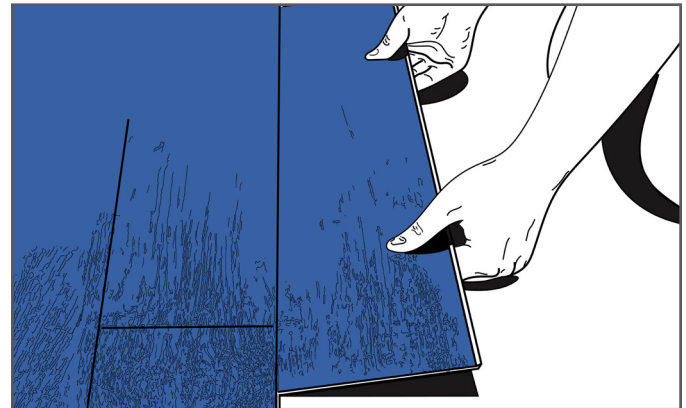


Figure 6 - Side Joints - Angle Plank & Slide Into Place

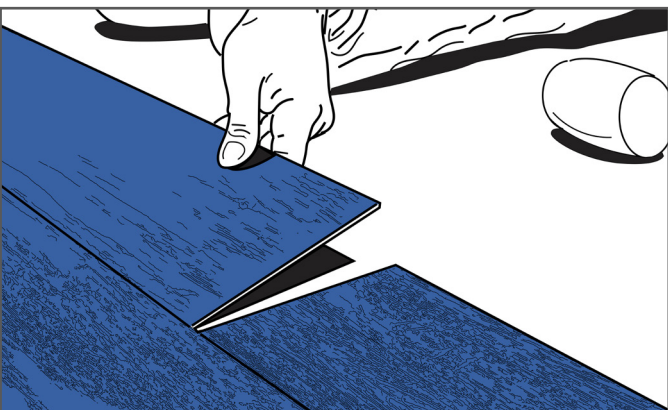


Figure 7 - End Joints - Align With Adjacent Plank

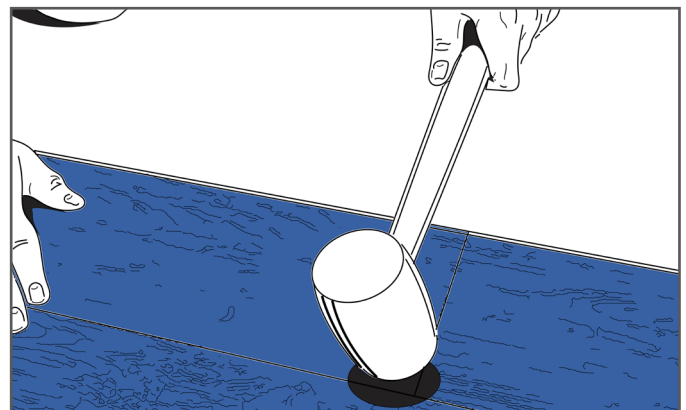


Figure 6 - End Joints - Lock Into Place With Mallet