

Countryside 3.0mm INSTALLATION INSTRUCTIONS

COUNTRYSIDE QUICK REFERENCE CHART (concrete):

1. Confirm vapor retarder (under on or below-grade slab)	Or use a suitable mitigation system and proceed to #5.
2. Ensure correct site and storage conditions	Between 65°F - 85°F (18°C - 29°C), ≥ 48-hours before and 5-days after installation
3. Test subfloor for moisture	Use ASTM F2659 to define where, then test following ASTM F2170
4. Select appropriate adhesive	T-226 (≤ 85% RH) or T-259 (≤ 95% RH)
5. If required, use a moisture mitigation system	That meets the performance requirements of ASTM F3010
6. Test for flatness	≤ 1/8-inch over 6-foot and 3/32-inch over 1-foot
7. If required, flatten and smooth the subfloor	Use suitable commercial grade, leveling or patching underlayment
8. Ensure flooring temperature is correct	Between 65°F - 85°F (18°C - 29°C) with a non-contact infrared thermometer
9. Test substrate for porosity (ASTM F3191)	Water droplets absorbed ≤ 10 minutes are porous, adjust open time accordingly
10. Adhesive coverage	~ 230 foot ² per gallon, depending on substrate and trowel angle
11. Adhesive application	1/16-inch x 1/32-inch x 1/32-inch U- notched trowel (FFA), 1 every 4-gallons

INSTALLATION INSTRUCTIONS:

GENERAL INFORMATION: This floor covering is for commercial, interior applications on suitable subfloors, which must be installed by professional installers with enough professional liability insurance coverage (aka Errors and Omissions) for the project. Do not use rubber or latex-backed matting on top of the floor covering. Use bathmats in areas that the flooring may become exposed to wet feet, like outside of showers or baths. Copies of ASTM documents are available from www.astm.org. If required or concerned, contact the technical department at 866-NOVALIS or techsupport@novalis-intl.com for assistance.

RECEIVING MATERIAL & STORAGE: Confirm the color, style and quantity, and lot numbers. Carefully check all materials for shipping damage. Note any damage on the bill of lading before signing for delivery. Visible damage not reported on the bill of lading is your responsibility. The floor covering, adhesive and accessories must be stored indoors, in dry conditions between 55°F - 85°F (13°C - 29°C). Do not store outside (even in containers) and do not stack pallets. Once received, it is recommended to unpack the pallets and place all boxes directly on the flat prepared substrate (not stacked). Floor coverings left stacked may take longer to acclimate.

WARNINGS: All local, state and federal regulations must also be followed; this includes but is not limited to the removal of any in-place asbestos (flooring or adhesives) and/or lead-containing material. The Occupational Safety and Health Administration (OSHA) has exposure limits for respirable crystalline silica; these limits must be followed. Do not use solvent/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.

Water, trapped beneath any floor covering, may facilitate mold, mildew, and or fungi growth. The limited warranty does not cover any resulting health issues or property damage. Do not leave spills unattended, wipe up promptly, and allow the surface to dry before trafficking. For areas that may be subjected to standing water on the surface of the floor covering, like along-side bathtubs or showers, they must be adequately sealed along the edge using a 100% silicon to prevent water from getting beneath the floor covering.

The label, installation, and maintenance instructions along with the warranty and any safety data sheet (SDS) must be read, understood, and followed before and during installation for all products to be utilized. Failure to do so may result in an uneven installation, premature wear, gapping, failure of the adhesive, debonding, cupping, buckling of the floor covering, peaked or gapped seams, etc., and voids the warranty. If the substrate or subfloor fails for any reason, including debonding, then the floor covering warranty is void.

RECOMMENDED TOOL LIST: Appropriate tools to prepare the substrate, Hepa filtered vacuum, safety glasses, dust mask, 6-foot metal straight edge or laser level, tape measure, pencil, framer's square, utility knife with blades, string line, adhesive trowel with enough 1/16-inch x 1/32-inch x 1/32-inch U-notched trowel (FFA) replacement blades (1-per 4-gallons), 100 lb. three-section roller, heat gun, non-contact infrared thermometer, and knee pads. Optional; Guillotine style cutter.

RADIANT HEATED SUBSTRATES: These are acceptable, providing they do not exceed 85°F, and the system is not used until at least 48-hours after the installation. Do not increase the temperature by more than 5°F per day, or thermal shock may result in bond failure.

GROUTING OPTION: This is acceptable, providing the flooring has a micro beveled edge. If required, grout the joints using a flexible grout specifically made for vinyl floor covering. During the flooring installation, leave a constant gap, either 1/16-inch, 1/8-inch or 3/16-inch wide, using tile spacers. Remove them before rolling and follow the written application and cleaning process instructions from the manufacturer.

UNSUITABLE SUBSTRATES: These include but are not limited to; existing floor covering, carpet, cushion vinyl, rubber, cork, asphalt tile, chipboard, particleboard, construction-grade plywood, OSB (unless skimmed with suitable patch and treated as non-porous), Luan flake-board, wafer board or mahogany-based plywood, Masonite™, finished or pre-finished paneling, varnished finishes, cement board, fiber-based backing boards or non-underlayment grade panels; oil-based enamels or similar paints, primer-sealers or primer stain-blockers, any floating (unfixed) floor covering, including acoustic or other underlayment's. Do not install directly over any existing or unapproved adhesive or adhesive residue of any kind. Do not install over any substrate with mold, mildew, or fungi or in wet areas like inside showers, saunas, or solariums. Note: If the flooring contractor elects to install over an existing floor covering, the flooring contractor assumes all responsibility as to the suitability and continued performance of that floor covering, including the additional indentation from any point loading.

DOCUMENTATION: Record (including photographs) and file, the original purchase invoice, site conditions, test results, and any corrective measures. It is required to maintain all documentation throughout the warranty period, in the unlikely event of a claim.

MAT BOND EVALUATIONS: These are only required if specified or the suitability of the substrate or preparation method is in question. For example, if using products or combination of products that are unfamiliar, if the surface is polished, a silicate admixture has been used or if sealed with a curing compound or similar. Follow the protocol of "ASTM F3311 Standard Practice for Evaluation of Performance and Compatibility for Resilient Flooring System Components Prior to Installation".

SITE CONDITIONS: The prepared installation area must be fully enclosed, weather-tight, and properly conditioned. Test and confirm ambient conditions which must be at a constant ($\pm 5^\circ\text{F}$) service temperature that is also between 65°F and 85°F, with ambient relative humidity between 35% - 65% and be at least 10°F above the dew point for ≥ 48 -hours before, during, and at least 5-days after the installation. Direct sunshine through windows etc. on the substrate must be covered using blinds, curtains (or similar) during this time, to allow the adhesive to cure. Use permanent or temporary HVAC systems as required. The conditions must also conform to the requirement and duration of all required test methods.

CONCRETE SUBFLOORS: Unless stated otherwise, prepare according to "ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring". Do not install over any expansion or moving joints as any subfloor movement may cause installation failure. When required, use a suitable industry-standard expansion joint assembly system. Dormant cracks and saw cuts must be cleaned out, removing all dirt and debris, then filled using a suitable commercial grade patching or crack repairing underlayment, follow the product instructions. Do not install if hydrostatic pressure exists, excessive carbonization, high concentrations of fly ash, Alkali Silicate Reaction (ASR) exists, or if a chemical adhesive remover has been used.

MOISTURE: All on and below-grade concrete slabs must have a confirmed and effective vapor retarder installed directly underneath the slab that meets the requirements of "ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs". If this cannot be confirmed, do not test for moisture, use an appropriate moisture mitigation system. Unless using an appropriate moisture mitigation system then all concrete subfloors must be tested for moisture regardless of grade level. Follow the protocol of "ASTM F2659 Preliminary Evaluation of Comparative Moisture Condition of Concrete, Gypsum Cement and Other Floor Slabs and Screeds Using a Non-destructive Electronic Moisture Meter". This is used to determine the areas of higher moisture content, which must then be tested following the protocol of "ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Slabs using in-situ Probes".

It may not be the flooring contractor's responsibility to conduct these tests, it is, however, to confirm that the testing has been performed and that the provided results are acceptable for the selected adhesive. Novalis T-226 adhesive has a limit of $\leq 85\%$ RH, while Novalis T-259 is $\leq 95\%$ RH. Alternatively, allow the subfloor to dry to an acceptable level or use an appropriate moisture mitigation system. Testing should be performed by an International Concrete Repair Institute (ICRI) certified technician (www.icri.org). pH testing is not required.

MOISTURE MITIGATION SYSTEMS: If required, it is recommended to use a suitable surface applied moisture mitigation system that conforms to the performance requirement (0.10 grains/h/ft²/in.) of "ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings", following the product instructions. Other types of moisture mitigation systems are available and may be acceptable like a single component, or other types of membranes. However, the warranty of its performance, suitability, and compatibility with the floor covering and its adhesive must be provided by the manufacturer of any such product used. Silicate admixtures are not recommended.

FLATNESS: Check the flatness of all appropriate subfloor/substrates using a 6-foot level, straight edge or laser level, and measure the gap. The acceptable flatness tolerance is $\leq 1/8$ -inch over 6-foot and $3/32$ -inch over 1-foot in all directions.

PREPARATION: if required, smooth using a commercial-grade, moisture, mold, mildew, and fungi resistant leveling or patching underlayment following the product(s) instructions. The selected product(s) must meet all building code requirements for the project, and its use, including any heavy static or rolling loads. A minimum of 1/8-inch thickness is required for it to be considered absorbent (porous). All underlayments must be cured and dry before covering, as defined by its manufacturer. Clean the required, prepared area with a Hepa filtered vacuum.

POROSITY: Determine if the substrate is absorbent (porous), as this changes the required open-time for the adhesive. Test all different areas and subfloor conditions according to "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 within 10 minutes for it to be

considered absorbent. Note: The adhesive open-time is the flashing off time required between the application of the adhesive and starting the installation. It permits the adhesive to develop more body and immediate tack.

WOOD SUBFLOORS: These must be prepared following ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring. The substrate must be clean (without contaminants), and dry according to the National Wood Flooring Association (NWFA) guidelines for the region. A double layer construction with a minimum total thickness of 1-inch, if required, use underlayment grade plywood, with a minimum thickness of 1/4" or for bathrooms, etc., use exterior underlayment grade plywood. The subfloor must be rigid, free from movement, and have at least 18-inches of well-ventilated air space below. Sleepers must not be directly in contact with concrete or earth, and a suitable vapor retarder must cover the ground beneath the subfloor. The substrate must also be smooth (ridge-free) with a minimum flatness tolerance of $\leq 1/8$ -inch over 6-foot and $3/32$ -inch over 1-foot in all directions. Note: "Unsuitable Substrates" section. Plywood seams may telegraph through any fully adhered resilient flooring, due to its natural expansion and contraction from changes of humidity, the limited warranty does not cover that.

GYPSUM SUBFLOORS: Any finished gypsum substrate must be dry, fully bonded, and structurally sound, clean (without contaminants), smooth (ridge-free) within a flatness tolerance of $\leq 1/8$ -inch over 6-foot and $3/32$ -inch over 1-foot in all directions. If required, smooth using a proper commercial-grade gypsum-based leveling or patching underlayment following the product(s) instructions. Determine if the substrate is absorbent (porous), as this changes the required open time of the adhesive. Test the surface according to ASTM F3191, the water droplet(s) placed on the substrate must be absorbed within 10 minutes for it to be considered absorbent. If required, prime the surface and confirm compatibility with acrylic adhesives.

OTHER SUBFLOORS/SUBSTRATES: These may be acceptable; however, they must be dry (within adhesive limitations), clean (without contaminants), structurally sound (well bonded), smooth (ridge-free) within a flatness tolerance of $\leq 1/8$ -inch over 6-foot and $3/32$ -inch over 1-foot in all directions. Mat Bond Evaluation(s) is required before the actual installation for these types of substrate.

ACCLIMATION: Depending on the temperature of the floor covering, an acclimation period may not be required. Upon receipt of the floor covering at the project, unpack the pallets and store the floor covering flat on the pre-acclimated and prepared substrate. Check the temperature of the floor covering, using a non-contact, infrared thermometer. All of the floor covering must be between 65°F - 85°F before installation begins. Do not install any floor covering with any visible defects or damage, as labor costs will not be covered.

LAYOUT: Make sure to follow the design drawings provided or agreed upon by the designer, architect, or end-user, it is recommended to have equal sizes on both sides of the area. Measure the width of each end of the area, calculate and mark your center or starting line. However, if the last row (at the wall) is less than half the width of the flooring, move your starting line over by half the width of the flooring. Clean the entire area to be installed (Hepa filtered vacuum).

CUTTING: To cut the floor covering, measure, mark, and carefully use a sharp utility knife and a framer's square to score a few times and then snap it along your cut and trim off any excess backing. Alternatively, cut using a guillotine style tile cutter. For complicated cuts, it is helpful to gently warm the flooring from the back using a heat gun (~ 6-inches away) before cutting.

ADHESIVE APPLICATION: Only use the recommended Novalis T-226 or T-259 adhesive as instructed, or the warranty will be void. Ensure you do not apply adhesive to an area so large that it cannot be completed within the working-time of the adhesive (2-hours). Following your starting line, apply the adhesive evenly to one side only using a 1/16-inch x 1/32-inch x 1/32-inch U-notched trowel (FFA) at an angle of approximately 45° to the prepared substrate, without voids, puddles or sharp trowel turns. Replace worn trowels (every 4 gallons), to ensure the right coverage (do not re-notch them). The open-time will depend on how absorbent (porous) the substrate is, and the ambient conditions. Typically, about 10-20 minutes if absorbent or 30-60 minutes for non-absorbent surfaces. Do not install the floor covering into wet adhesive if the substrate is non-absorbent.

INSTALLATION: Mix the floor covering from several boxes to ensure a random appearance. During the installation, inspect each piece for visible defects, including damage, gloss, color, or shade variations. After the adhesive application and appropriate open-time, install the flooring following your layout and starter line, keeping all joints snug, yet without pressure fitting. Continue with one row at a time, including the perimeter cuts. After each section is completed and within the working-time, roll the entire area slowly, width then length, using a 100 lb. three-section roller. Failure to roll correctly may result in bond failure. For planks, the waste may be used to start one of the following rows, make sure the end joints are random and at least 6-inches apart from the previous row. Repeat this process for the remainder of the installation. Immediately remove any adhesive from the surface using a clean damp (water) cloth. If the adhesive has dried, use a small amount of 70% Isopropyl alcohol and a clean cloth to remove it.

PROTECTION & COMPLETION: If required, protect the floor covering from other trades or heavy loads using 1/2-inch plywood (or similar) and join sheets together using duct tape (or similar). Use felt glides ≥ 1 -inch² (645-mm²) on all slidable furniture. Do not move heavy or sharp objects directly across the floor; use hard surface "Sliders" (from home improvement stores). Take photographs and have any required documentation signed.

December 1, 2019

MAINTENANCE INSTRUCTIONS:

PRECAUTIONS: Do not perform any wet maintenance procedures for 5-days after the installation to allow the adhesive to cure. Always post "wet floor" signs and/or use "caution tape" when wet/damp maintenance is to be performed. Remove all metal objects before wetting the flooring and prohibit foot traffic until the floor is dry. Follow the facility's Standard Operating Procedures (SOP).

GALLERY

S E R I E S

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Do not use dust mops treated with oils or silicones, acetone, strong alkaline cleaning agents, multi-surface cleaners, vinegar/ammonia/ citrus oil solutions, scouring powder, strong solvents, or abrasive cleaning pads, as these can damage the flooring. The application of a floor-finish is not usually recommended and will change the maintenance protocol.

REGULAR CLEANING: Dust-mop or vacuum (without a beater bar) the floor to remove any dirt or grit. Damp-mop the floor as often as required using a flat microfiber mop and water or a suitable diluted vinyl floor cleaning solution (neutral pH), changing the pad as often as required.

DEEP CLEANING: This may be required when routine cleaning is not meeting expectations. Dust-mop or vacuum the floor to remove dirt or grit. Wet mop the entire floor using a suitable neutral cleaning solution like Diversey Profi (or similar). Allow the solution a dwell time of approximately 5-10 minutes. Scrub the floor using a suitable auto-scrubbing machine or single-disc, rotary floor scrubber (~ 175 RPM) with a white pad. For small areas, a medium nylon broom and wet vacuum may also be used. Remove the soiled solution using the auto-scrubber or wet vacuum. Rinse with clean water, remove it, and allow it to dry before trafficking.

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