

## Natchez 2.0mm SPC Installation Instructions

**General Information & Limitations:** Natchez 2-mm is a luxury vinyl floor covering designed to be installed indoors only, for residential applications. All installations must be performed by a qualified flooring contractor with enough professional liability insurance coverage (aka Errors and Omissions Insurance) for the project. Use non-rubber backed entrance matting at all outdoor entrances as this will improve air quality and reduce maintenance. Copies of all ASTM documents are available from [www.astm.org](http://www.astm.org). If required or concerned, immediately contact Powerhold at 844-638-4583 or visit [powerhold.com](http://powerhold.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 40°F - 90°F (4°C - 32°C). Do not store outside (even in containers) and do not stack pallets.

**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-foot and 1-foot straight edge or level, two U.S. quarters (coins), tape measure, pencil, speed square, utility knife with blades, chalk-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, Oscillating Multi-Tool or hand saw (door jambs), non-contact inferred thermometer, and knee pads.

**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. 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, the 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 "grab" rails where this floor covering is used next to wet or barefoot areas, like showers and baths.

**Documentation:** Record (including photographs) and file the site conditions, test results, and any corrective measures taken. It is required to maintain all of this documentation along with the original invoice and any labor receipts throughout the warranty period, as this is required 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. 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 and weather tight. Use permanent or temporary HVAC systems to control the site conditions. The temperature for the installation must match the “in-service” temperature and be constant (  $5^{\circ}\text{F}$ ). In addition, it must also be between  $60^{\circ}\text{F}$  ( $16^{\circ}\text{C}$ ) and  $85^{\circ}\text{F}$  ( $29^{\circ}\text{C}$ ) for 48-hours before, during and after the installation. The ambient relative humidity must be between 35% and 65% and  $\geq 10^{\circ}\text{F}$  above dew point, with temperatures rising (calculations are available on the web), or the adhesive drying will be severely affected. Protect the adhesive and floor covering from excessive temperature fluctuations through windows etc. using blinds, drapes (or similar). For any project that does not meet these requirements, please contact the technical department for project specific instructions.

**Radiant Heated Substrates:** When installing floor covering over a substrate that contains a radiant heating system, ensure the radiant heat is not in direct contact with the floor covering, and is set at the correct “in-service” temperature for 48-hours prior, during and after the installation. The radiant heat may be gradually increased or decreased to maintain the correct “in-service” site conditions.

Note: Any rapid changes to the temperature of radiant heating systems may cause thermal shock, resulting in a bond failure. Ensure the temperature of the radiant heating system does not exceed  $85^{\circ}\text{F}$  ( $29^{\circ}\text{C}$ ).

**Flatness:** Check all substrates for flatness prior to installation. The maximum acceptable tolerance is a 1/8-inch gap (2 x U.S quarters) over 6-foot and 1/16-inch gap (1 x U.S quarter) over 1-foot. Make any necessary and appropriate adjustments to the substrate before installation.

**Concrete Subfloors:** The prepared substrate must be dry (see “Concrete Moisture”), clean and without contaminants and be structurally sound. If required, smooth using a suitable, moisture resistant commercial grade leveling or patching underlayment, following the product instructions. Do not install if hydrostatic pressure is visible or suspected, or if a chemical adhesive remover has been used, contact the technical department.

Do not install over any expansion or moving joints as any subfloor movement may cause an installation failure. When required, use a suitable industry-standard expansion joint assembly system. Permanently dormant cracks and saw cuts are acceptable to install over, but first must be cleaned out, removing all dirt and debris, then fill using a moisture resistant commercial grade patching or crack repairing underlayment, follow the product instructions.

**Concrete Moisture:** On and below-grade concrete subfloors must all have a confirmed and effective vapor retarder installed directly underneath the slab which 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, then refer to and use an appropriate “Concrete Moisture Mitigation System”.

When not using a “Concrete Moisture Mitigation System”, all concrete subfloors, including those with silicate admixtures or topical treatments must be tested for moisture. Follow the protocol of “ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Slabs using in-situ Probes”. The results must be  $\leq 90\%$  RH or refer to and use an appropriate “Concrete Moisture Mitigation System”.

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 before installation.

Moisture testing should be performed by an International Concrete Repair Institute (ICRI) certified technician ([www.icri.org](http://www.icri.org)).

**Concrete Moisture Mitigation System:** When appropriate, use a dimensionally stable surface applied concrete moisture mitigation system that when tested according to “ASTM E96 / E96M Standard Test Methods for Water Vapor Transmission of Materials” (Method B), has a permeability value of  $\leq 0.1$  grains/foot<sup>2</sup>/hour, confirm with the manufacturer before use. In addition, it must be compatible with both the substrate and surface preparation or adhesive being used. Unless positive, perform “Mat Bond Evaluations” following all product instructions. The liability and warranty for the performance of any product remains with its manufacturer.

**Wood Subfloors:** All wooden subfloors and substrates must be and remain dry according to 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 meet the local building code, 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. It must be without contaminants and be at least 1-inch thick, be at least a double layer construction using an underlayment grade plywood with a minimum thickness of 1/4-inch 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 porous, therefore the seams may telegraph through any flexible resilient flooring, due to the natural expansion and contraction from humidity changes.

**Gypsum Subfloors:** Any finished gypsum substrate must be prepared and installed in accordance with “ASTM F2419 Standard Practice for Installation of Thick Poured Gypsum Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring” or “ASTM F2471 Standard Practice for Installation of Thick Poured Lightweight Cellular Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring”. The substrate must also be and remain dry according to the manufacturer, be structurally sound and firmly bonded and without contaminants.

**Unsuitable Substrates:** These include but are not limited to; existing carpet, rubber, floating floors, soft acoustic type underlayment, hardwood, cork or asphalt tile. Substrates with a varnish, oil-based, enamels, paints, primer-sealers or primer stain-blockers etc. Chipboard, fiber-based boards or any non-underlayment grade panels, particleboard, construction-grade plywood, CDX, OSB (including AdvanTech™), Luan, cement board flake-board, wafer board or Masonite™, these must be removed or overlaid with an underlayment grade plywood. Do not use pressure-treated or fire-retardant plywood. Do not install directly over any existing adhesive residue of any kind. Do not install over any substrate with mold, mildew, fungi or in wet areas like inside showers, saunas, or solariums.

Note: Electing to install over any existing floor covering, assumes full responsibility for the suitability and continued performance of that product, including any resulting effect on the new floor covering like its debonding and excessive indentations.

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

**Acclimation:** Depending on the temperature of the floor covering, an extended acclimation period may not be required. Check the temperature of the floor covering, using a non-contact, infrared thermometer, the floor covering must be at the same temperature as the site conditions ( 2°F) before installation.

**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 centered starting line (center of the room). However, if the last row (at the wall) is less than half the width of the floor covering, move your starting line over by half the width of the floor covering. For planks, it is recommended to install them in a random pattern with end joints at least 8-inches apart from the previous row and avoiding the stair steps effect. Tiles are recommended to be installed in a brick-bond pattern.

**Cutting:** To cut the floor covering, measure and mark the surface with a pencil, then carefully score the surface a few times using a sharp utility knife along the side of a speed square at your mark then snap it downwards. For complicated cuts, it is recommended to use a jigsaw with carbide blades following the manufacturers safety and usage instructions. Alternatively, gently warm the back of the floor covering using a heat gun (~ 8-inches away) before cutting.

**Adhesive & Coverage:** Use Powerhold 6373 adhesive, the coverage will be about 225 foot<sup>2</sup> per gallon depending upon the substrate and trowel angle.

**Preparation:** It is recommended to pre-cut the door jambs using an Oscillating Multi-Tool or hand saw so the floor covering can be slid underneath. Clean the entire area to be installed twice using a Hepa filtered vacuum.

**Adhesive Application:** Ensure you do not apply adhesive to an area so large that it cannot be completed within the working-time of the adhesive (about 4-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 trowels every 4 gallons to ensure an even coverage, do not re-notch them. 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. Make sure the arrows embossed or printed on the back are all pointing in the same direction. During the installation, inspect each piece for visible defects, including damage, gloss, color, or shade variations. Do not install any floor covering with visible defects or damage, as removal, subfloor repair and replacement labor costs will not be covered.

After the appropriate open time for the adhesive, install the floor covering, including perimeter cuts, following your layout and starter line, keeping all joints snug, yet without pressure fitting. Installing the floor covering straight is required. The acceptable tolerance is within 1/16-inch > 20-foot in length or 1/32 < 20-foot. After the section is completed, roll the entire area slowly, across the width then length, using a 100 lb. three-section roller. Failure to roll correctly may result in bond failure. Repeat this process for the remainder of the installation. Immediately remove any adhesive from the surface using a clean damp (water) white cloth. If the adhesive has dried, use a small amount of 70% Isopropyl alcohol and a clean white cloth to remove it.

**Protection:** If required, protect the clean floor covering from other trades or heavy loads using 1/2-inch plywood or similar and tape all seams. For light traffic use Ram board or similar and tape all seams. Use only non-pigmented hard plastic, nylon, or felt glides (replaced > 3-times a year), keeping them clean and grit-free. They should be ≥ 1-inch<sup>2</sup> on all slidable furniture. Use either chair mats underneath castor chairs or soft "W-type" PU wheels. Use non-rubber backed entrance matting at all outdoor entrances; this will improve air quality and reduce maintenance. Do not move heavy or sharp objects directly across the

# GALLERY

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surface, use hard surface "Sliders" (available at home improvement stores). For areas that may be subjected to standing water on the surface, like along-side baths or showers, the edges must be properly sealed using a 100% silicon to prevent water getting beneath the flooring. Take photographs and have any required documentation signed and filed.

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