

SMART STEP VINYL STAIR TREAD

NOTICE TO OWNER & INSTALLER

THIS DOCUMENT CONTAINS IMPORTANT INSTALLATION AND MAINTENANCE INFORMATION AS WELL AS CAUTIONS AND WARNINGS. PLEASE MAKE CERTAIN THESE INSTRUCTIONS ARE PLACED IN THE HANDS OF THE FLOOR OWNER. VPI WARRANTY WILL BECOME EFFECTIVE ONLY IF THESE INSTRUCTIONS ARE FOLLOWED IN EVERY ASPECT.

IN SITUATIONS WHEN A WARRANTY CLAIM IS DEEMED VALID BY VPI, VPI'S LIMITED WARRANTY LIMITS VPI'S LIABILITY TO PARTIAL OR TOTAL REPAIR, REPLACEMENT, CREDIT OR OTHER, AT VPI'S SOLE OPTION, FOR VPI FLOOR PRODUCTS FOR WHICH A CLAIM, VALIDATED BY VPI, HAS BEEN MADE ACCORDING TO VPI'S CLAIM PROCEDURE.

CLAIMS FOR SURFACE DEFECTS OR VARIATIONS IN COLOR OR PATTERN MUST BE MADE TO VPI PRIOR TO INSTALLATION OF THE MATERIAL. CONSEQUENTIAL DAMAGES, LABOR COSTS AND ALL OTHER NON-PRODUCT COSTS ARE NOT COVERED BY VPI OR THIS WARRANTY AS A CONDITION OF SALE.

IN PARTICULAR, NOT USING VPI RECOMMENDED ADHESIVE AND NOSE CAULK IN ALL INSTALLATIONS OR FAILURE TO SAND (ROUGH UP) THE BACK OF EACH TREAD AND NOSE PRIOR TO INSTALLING ON NONPOROUS INSTALLATIONS, ALONG WITH ANYTHING THAT DEVIATES FROM THE FOLLOWING INSTRUCTIONS, VOIDS THE WARRANTY COVERAGE

FOR A COMPLETE STATEMENT OF VPI'S EXCLUSIVE WARRANTY, CONTACT: VPI CUSTOMER SERVICE. DO NOT USE VPI PRODUCTS IF UNWILLING TO ACCEPT THE TERMS AND CONDITIONS OF THE WARRANTY.

VPI, CUSTOMER SERVICE, P.O. BOX 451, SHEBOYGAN, WI 53082-0451.

Website: www.vpiflooring.com

Please note: In all cases, installations should comply with procedures outlined in ASTM Standards for installation, at a minimum. For procedures specific to VPI products, please refer to the instructions below or check our website for the most current recommended installation techniques.

General Setup

VPI stairwell management system and adhesive should be stored on the job site for 48 hours prior to the start of the installation. Remove the treads from the cartons or pallet to ensure the treads are acclimated to the ambient temperature. Stair treads must be stacked squarely on top of one another and never be stored on edge. Always protect the treads from damage while they are acclimating to ambient temperature. Ambient and the product temperature should be maintained between 65° F and 85° F during the installation, as well as for 48 hours before and after the installation.

SUB-FLOOR PREPARATION

All staircases must be structurally sound, dry, clean and free of dirt, dust, wax, grease, paint, polishes, oil, curing compounds, sealers and all other materials that would interfere with good adhesion. The sub-floor surface must be smooth and flat with a maximum variation of 1/8" in 10 feet.

All cracks, depressions and other imperfections must be repaired with a high quality, cementitious or epoxy leveling compound or appropriate underlayment. Any uncorrected sub-floor irregularities may telegraph through the stair tread and be visible on the surface of the finished installation.

Additional information regarding the sub-floor installation and requirements can be found in **ASTM F710**.

NOTE: Gypsum-based underlayment products should not be used.

Adhesive Bond Test: In addition to, and not in lieu of, any relevant moisture tests, perform the Adhesive Bond Test in several locations throughout the area to receive the stair tread. Glue down, at minimum, a 3' long stair tread with the adhesive, roll with a hand roller, then allow to set for 72 hours. A sufficient amount of force should be required to remove the stair tread. Bond tests should be done across the recommended open time spectrum so that the optimal working time can be determined. Working times vary depending on substrate, environment and many other factors.

IMPORTANT

Without dated documents showing pH, RH, calcium chloride and bond test results, no warranty claim will be accepted for consideration.

CONCRETE

Moisture testing: It is essential that moisture tests be performed on all concrete sub-floors regardless of the grade level or whether or not the concrete is freshly poured or is classified as an older slab. Moisture testing **MUST** be performed by either:

ASTM F1869: Moisture Vapor by Calcium Chloride

ASTM F2170: Relative Humidity in Concrete Using Probes

Moisture levels, when measured by these methods, are not to exceed requirements below. If the test results exceed the limitations, the installation should not proceed until the problem has been corrected.

Adhesive Moisture Requirements:

VPI 503 MVER 6 lbs. maximum, RH 85%

It is recommended that new concrete slabs on or below grade should be treated with a permanent moisture barrier such as six mil polyethylene film. Any concrete in contact with earth or with less than 18" of cross-ventilated air space under it is considered to be on grade.

SUB-FLOOR PREPARATION

CONCRETE(cont)

New concrete staircases must be properly cured. A drying time of one month per inch of concrete is generally required after a slab is poured and protected from the weather. Lightweight aggregate concrete floors, and floors with steel or plastic pan construction, and floors poured over a permanent moisture barrier usually require an extended drying time. If lightweight aggregate concrete weighs less than 90 pounds per cubic foot, a topping of regular concrete at least one inch thick is required. To expedite drying time, adequate heat and ventilation should be provided.

Alkalinity (pH) Test: To determine the pH of the concrete surface, use wide range pH paper, its associated pH chart, and distilled or deionized water. Place several drops of water on a clean surface of concrete, forming a puddle of approximately 1" diameter. Allow the puddle to set for 1 minute, then dip the pH paper into the water. Remove immediately and compare to chart to determine pH reading.

Additional information regarding these tests and results can be obtained through VPI's Technical Service Department.

Exceptionally smooth concrete: If concrete surface is exceptionally smooth, with little porosity, it should be acid etched with a 15% diluted solution of muriatic acid before installing flooring. Neutralize the concrete after etching by rinsing with clear water and ammonia using 6-8 oz. of ammonia per 1 gallon of water.

Previously covered concrete: Completely remove all remaining floor down to bare concrete. Be sure to eliminate all residual adhesive, or completely cover the sub-floor with a high-quality cementitious underlayment, warranted for such applications.

TERRAZZO STAIRCASES

Inspect the terrazzo for any sealer or film on the surface. This must be removed before proceeding with the installation.

CERAMIC TILE

All ceramic tiles must be bonded securely to the substrate. Any loose tiles must be removed. Clean existing ceramic tile using muriatic acid/water and neutralize with ammonia, as directed for smooth concrete. After floor has dried, apply a thin rich coat of Portland cementitious underlayment with a liquid latex binder to achieve a smooth surface prior to installation of stair tread.

EXISTING RESILIENT FLOORING

VPI does not recommend, nor do we warrant, any installation over existing resilient materials. All resilient material must be removed prior to any installation of VPI products and the subfloor prepared per VPI's recommendations.

WOOD STAIRCASES

Stair tread may be installed over wood staircases. Wood staircases must be double construction with a 1" minimum thickness, structurally sound, securely fastened and free from deflection/spring. The substrate must be dry, clean, free from raised nails, screws, paint, oils, solvents, floor finishes and urethanes, and any other extraneous materials.

METAL DECKS

Metal substrates must be thoroughly rough sanded and primed with Rust-oleum Professional Primer or equivalent. Metal decking must be flat, dry, clean and free from dust, paint, asphalt, old adhesives, grease, oil, rust and other extraneous material. Level all surface irregularities with a Portland cement/liquid latex mixture underlayment.

ADHESIVE INSTRUCTIONS

Read adhesive instructions on containers for care and clean up. Perform an adhesive bond test with actual tread, adhesive, and substrate prior to installation to determine adequate performance.

Stringer Adhesive

VPI 100 2 Part Epoxy Adhesive is a solvent-free, adhesive that is designed to permanently install dimensionally stable rubber or vinyl stair stringers. VPI 100 rubber/ vinyl stair well system adhesive can be spread over porous and non-porous surfaces free of moisture. It can be used on all grades of concrete on above or below grade in the absence of moisture, as well as suspended approved wood floors (APA). This adhesive has excellent resistance to plasticizer migration and sets to a tough permanent bond. **See adhesive label for detailed application instructions.**

One gallon covers 210-250 linear feet of 7" stringer using a 1/16" x 1/16" x 1/16" square notch trowel. Cure time of 24 hours.

Stair Tread Adhesive & Nose Caulk

VPI 503 One Part Adhesive is a solvent-free, acrylic adhesive that is designed to permanently install dimensionally stable rubber / vinyl stair well systems. VPI 503 rubber/ vinyl stair well system adhesive can be spread over porous and non-porous surfaces free of moisture. It can be used on all grades of concrete on above or below grade in the absence of moisture, as well as approved suspended wood floors (APA). This adhesive has excellent resistance to plasticizer migration and sets to a tough permanent bond. **See adhesive label for detailed application instructions.**

One gallon covers 125'-150' linear feet of 12" regular or round (bull nose) stair tread using a 1/16" x 1/16" x 1/16" square notch trowel. Cure time of 48 hours – 72 hours for heavy traffic and rolling loads.



ADHESIVE INSTRUCTIONS(cont)

Nose Caulk

VPI NC-2 is a solvent-free, two-component Epoxy Nose-Caulk designed for use with rubber & vinyl stair treads. It's a non-flammable, high-performance epoxy adhesive, recommended for indoor stair installations over porous and non-porous substrates. It is recommended for all stair treads and nosings, providing support to the nose. Stairs (substrate) must be structurally sound, dry, clean and free of dirt, dust, grease, paint, curing compounds, sealers, or any other extraneous material which may interfere or compromise adhesion. Application over concrete stairs requires the concrete to be fully cured and dry. Adequate Nose caulk must be applied to the corner of the stair tread nose so that when placed into position all voids are filled.

See Nose-Caulk label for detailed application instructions.

Coverage will be approximately 25 linear feet with a 3/8" bead.

Set time of 30 minutes.

Cure time of 24 hours – 72 hours for heavy traffic and rolling loads

EQUIPMENT REQUIREMENTS

- 25 ft retractable rule
- Retractable knife
- Spare blades
- Pencil
- Masking tape
- Trowel 1/16" x 1/16" x 1/16"
- Gundlach Airway #222 Hand roller or equivalent

INSTALLATION OF STAIRWELL SYSTEM

STRINGER INSTALLATION

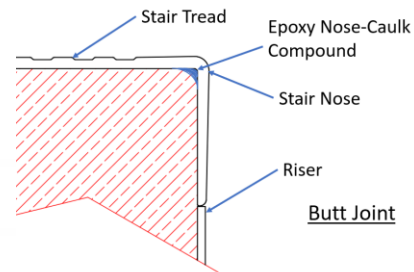
Stringers are applied to vertical wall surfaces next to the stair tread.

- Make a template in cardboard or an appropriate material.
- Measure the height and depth of each step and transfer the measurements to the template.
- Rough cut the template.
- Fit template to stairs and trim template where necessary to obtain a snug fit to the staircase.
- Cut stringer material utilizing template. Dry-fit stringer material to staircase and make any necessary adjustments before permanent installation.
- The VPI 100 Adhesive can be spread on porous and non-porous wall surfaces with a trowel 1/16" x 1/16" x 1/16" square notched. **Refer to the adhesive instructions for proper use of the adhesive.**
- Position and install the stringer followed by hand rolling to ensure that the adhesive transferred.
- Clean up any excessive adhesive before the stair treads are installed.

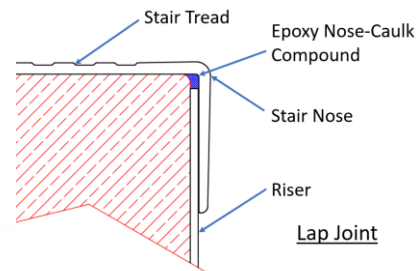
VINYL STAIR TREAD AND RISER INSTALLATION

--NOT USING VPI BRANDED ADHESIVE AND NOSE CAULK IN ALL INSTALLATIONS, OR FAILURE TO SAND (ROUGH UP) THE BACK OF EACH TREAD BEFORE INSTALLATION ON NONPOROUS SUBSTRATES, ALONG WITH ANYTHING THAT DEVIATES FROM THESE INSTRUCTIONS, VOIDS WARRANTY COVERAGE.

- Vinyl stair tread must be trimmed to fit and dry laid on each step prior to any adhesive application. Each step in the staircase may have a different width and depth.
- Make sure all conditions are met regarding surface preparation before starting the installation.
- Scuffing back of tread and under nose with 60 grit sandpaper prior to installation is required in all nonporous installations.
- Wipe the back of each tread with a clean dry cloth to remove any debris.
- Cut all treads 1/16" short on both ends and 1/16" short in depth to allow for expansion. Each step must be dry laid to ensure proper fit.
- Risers are cut and dry fit with the same methods as used for the treads.
- If using the Butt Joint method, you will need to place the tread nose over the riser. Then scribe the cut line using the nose as the guide. Trim the riser with the appropriate cutting method.
- Use VPI 100 to adhere the riser to the substrate.



- If using the Lap Joint method, trim the riser to 1/4" to 1/2" below the top of the step to allow space for the Epoxy Nose Caulk. Using this method requires laying the riser prior to laying the tread.
- Use VPI 100 to adhere the riser to the substrate.



VINYL STAIR TREAD AND RISER INSTALLATION (cont)

If the substrate is porous:

- Ensure substrate surface has been prepared properly.
- Spread VPI 503 adhesive on tread and nose, using specified trowel, leaving between ½" to ¾" free of adhesive at the nose for application of nose caulk. Allow the adhesive to flash off for 5 – 10 minutes.
- Apply NC-2 Epoxy Nose Caulk to the inside of the square tread nose and on the face of the step edge to adequately fill the void. Nose Caulk is not necessary for the round (bull nose) tread. Cut the mixing nozzle to an inside diameter of 3/8". Do Not Remove the internal mixer. Remove the end cap and attach the mixing nozzle with the retaining nut to the cartridge. Purge the mixing nozzle before each use with approximately 1" to 2" of compound, dispose of the purge material. The filler is ready for use. Coverage will be approximately 25 linear feet with a 3/8" bead. Cartridges with remaining compound may be reused again by replacing the mixing nozzle at the time of your next use.
- Apply enough caulk inside the tread/nosing so when the nosing is pressed into place the caulk will conform to the step edge & achieve 100% contact between the nosing area and the step edge. Leave ½" along each side of the tread free of any compound. The NC-2 needs to be positioned within 30 minutes of applying to the nose. Note higher ambient temperatures will result in the adhesive curing faster, shortening the 30 minutes.
- Thoroughly roll the tread with a Gundlach Airway #222 hand roller, being careful to not roll the edge of the nose where the caulk has been applied. Rolling the nose will displace the compound and reduce the compound's performance.
- Wipe up spills with mineral spirits and clean cloths before any adhesive or compound sets up.

If the substrate is nonporous:

- Ensure substrate surface has been prepared properly
- Backside of treads must be sanded in all nonporous applications. Not sanding voids warranty.
- Spread VPI 503 adhesive on tread and nose, using specified trowel, leaving between ½" to ¾" free of adhesive at the nose for application of nose caulk. Allow the adhesive to dry to the touch. When you run your fingers across the trowel ridges, the ridges should be pliable with moderate finger pressure. From the time the adhesive is dry to the touch there are approximately 45 minutes to lay the stair tread into position. Do not allow the adhesive to dry too long as loss of adhesion strength may occur!
- Apply NC-2 Epoxy Nose Caulk to the inside of the tread nose and on the face of the step edge to adequately fill the void. Nose Caulk is not necessary for the round (bull nose) tread. Cut the mixing nozzle to an inside diameter of 3/8". Do Not Remove the internal mixer. Remove the end cap and attach the mixing nozzle with the retaining nut to the cartridge. Purge the mixing nozzle before each use with approximately 1" to 2" of compound, dispose of the purge material. The filler is ready for use. Coverage will be approximately 25 linear feet with a 3/8" bead. Cartridges with remaining compound may be reused again by replacing the mixing nozzle at the time of your next use.
- Apply enough caulk inside the tread nose so when the nosing is pressed into place the compound will conform to the step edge & achieve 100% contact between the nosing area and the step edge. Leave ½" along each side of the tread free of any compound. The NC-2 needs to be positioned within 30 minutes of applying to the nose. Note higher AMBIENT temperatures will result in the adhesive curing faster, shortening the 30 minutes.
- Thoroughly roll the tread with a Gundlach Airway #222 hand roller, being careful to not roll the edge of the nose where the compound has been applied. Rolling the nose will displace the compound and reduce the compound's performance.
- Wipe up spills with mineral spirits and clean cloths before any adhesive or compound sets up.



STAIR WELL MAINTENANCE

SMART STEP VINYL STAIR TREAD

MAINTENANCE

NOTE: Treads become slippery when wet and care must be taken. Appropriate barriers to wet areas and “warning / caution” placards should be used in all instances.

- Allow the adhesive on the installed treads to thoroughly dry, about 24 – 48 hours, before completing the initial maintenance.
- Treads are maintained by hand.
- Damp mop or dust mop to remove dust and debris.

- Clean excessive dirt from the tread using a neutral cleaner. Use instructions on the bottle of cleaner for mixing. Let the cleaner work for 5 – 10 minutes. Scrub with a soft brush while still wet.
- Wipe up any excess cleaner with a dry cloth per instructions.
- It is not necessary to apply a finish to the stair treads. If a finish is desired, clean with denatured alcohol, allow treads to dry and apply coating per manufacturer’s instructions
- Clean treads as conditions and soiling dictate.

Any questions about surface preparation, sub-floor conditions or general installation questions or maintenance not covered in these instructions, please contact VPI.

VPI Corporation, 3123 S.9th Street, PO Box 451, Sheboygan, Wisconsin 53082-0451 U.S.A.
Phone: (920) 458-4664 – Fax: (920) 458-1368 - Customer Service: (800) 874-4240
Email: floor@vpicorp.com Website: www.vpiflooring.com

