

Floorazzo™ Stair Treads and Risers Installation Instructions

These instructions supersede any verbal or written instructions from Floorazzo Tile LLC representatives, and must be followed for the warranty to be in effect.

1. INTRODUCTION

- 1.1 Floorazzo Tile LLC manufactures high quality terrazzo stair treads and risers recommended for indoor use only. Do not proceed with installation until these instructions have been completely read and understood!
- 1.2 Floorazzo™ products shall be installed by experienced professional installers with a minimum of five years of installation experience.
- 1.3 Substrate testing and preparation shall follow industry standards (ASTM F710) and the adhesive manufacturer's installation guidelines. It is critical to identify the substrate to be covered to determine the need for substrate testing. Only solid concrete steps require RH testing. Concrete in metal pans do not require testing. Correctly identifying the substrate also determines the correct adhesive to be used for installation. For situations that are not covered in this document, contact Floorazzo Tile LLC directly.
- 1.4 Floorazzo™ is a natural product and each tread and riser is individually cast, no two treads or risers are exactly the same. Field measurements are recommended to determine the correct size of castings. Treads and risers can be cut in the factory, but oversized castings allow for jobsite cutting and fitting. For this reason, it is necessary to dry lay the treads and risers in sequence, prior to installation to inspect and ensure that the visual properties will flow smoothly from one tread to the next. The installer shall dry lay the treads and risers, step back and review the appearance of the installation before proceeding. Treads and risers should be adjusted as necessary in order to achieve a more uniform look. It is advisable for the specifier and/or end user to be present during this process.
- 1.5 For situations that are not covered in this document, contact Floorazzo Tile LLC directly.

2. MATERIAL HANDLING AND STORAGE

- 2.1 Upon receipt, inspect product for damage and mark shipping documents as such before signing for the shipment. Contact shipper and/or Floorazzo Tile LLC to report damage. If material is distorted or otherwise damaged during storage or transportation, do not install.
- 2.2 Handle Floorazzo™ Stair Treads and Risers with care. Treads and risers can be broken if not handled carefully and placed on a smooth, hard and flat substrate.
- 2.3 Protect all materials, including but not limited to, underlayment panels, patching/leveling compounds, floor covering, adhesive, and maintenance products from extremes of temperature during shipping. Some products must not be allowed to freeze. Store all products in areas on the job site where they are to be installed. Areas shall be enclosed and weather tight, at 65°F - 80°F for a minimum of 48 hours prior to commencement of installation.
- 2.4 Prior to installation, Floorazzo™ Stair Treads, Risers, and Nosing shall be stacked, walking facing side up, 3" high (maximum) on a smooth, flat and hard substrate to acclimate to the room temperature for a minimum of 48 hours. Proper acclimation of material will reduce the potential of cracking or breakage during routine handling.

- 2.5 Inspection of materials: Great care is taken to properly label and inspect materials for defects at all phases of manufacturing and handling by Floorazzo Tile LLC. In the rare case where the wrong product or material with visible defects is shipped, these products shall not be installed. Careful inspection of the product before installing is the responsibility of the installer. Installation of the product denotes acceptance of the product. Floorazzo Tile LLC will not honor any warranty or requests for return authorization for materials installed in the wrong color, with visible defects or other damage.

3. SUBSTRATE PREPARATION AND TESTING

- 3.1 All substrates must be sound, clean, permanently dry, smooth, and free of cracks and contaminants including, but not limited to; paint, old adhesive, curing compounds, oil, grease, wax, asphalt, or other contaminants that could affect the adhesive bond. It is critical to identify the substrate that will receive the tread and riser. With treads and risers, it is possible that the substrate for the tread could be concrete and the riser could be metal. That means a different adhesive could be used for each substrate. It is necessary to read the adhesive manufacturer's product data sheet to determine what is an acceptable substrate. Any and all contaminants must be removed by mechanical means only. Do not use chemical adhesive or contaminant removers.
- 3.2 Concrete Substrates:
- 3.2.1 Follow guidelines of ASTM F710 *Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring**. ASTM F710 includes but is not limited to, requirements for moisture testing, smoothness, flatness, concrete strength, and the presence of a vapor retarder beneath the slab.
- 3.2.2 *The installation of a permanent, effective moisture vapor retarder with a minimum thickness of 0.010 in. and a permeance of 0.1 y, as described in Specification ASTM E 1745 is required under all on- or below-grade concrete floors. The use of such a moisture vapor retarder, provided its integrity has not been compromised, reduces potential severity of water vapor penetration. Every concrete floor slab on- or below-grade to receive resilient flooring shall have a water vapor retarder (often improperly called a vapor barrier) installed directly below the slab. **
- 3.2.3 *Joints such as expansion joints, isolation joints, or other moving joints in concrete slabs shall not be filled with patching compound nor covered with resilient flooring**. Do not install Floorazzo™ over expansion joints or other moving joints. Use an expansion joint cover or expansion joint profile.
- 3.2.4 *All concrete slabs shall be tested for moisture, regardless of age or grade level.** The only acceptable test method is Relative Humidity test (ASTM F 2170). Moisture meters, plastic sheet test or other methods are not acceptable for determining the suitability of concrete slabs to receive resilient floor coverings. It is recommended testing be conducted using the Wagner RH 4.0 System. Test procedures shall be followed exactly in order for test results to be valid. Building shall be at in-service temperature and humidity, concrete shall be properly cleaned, and recommended number of tests shall be conducted. See ASTM standards for details.
- 3.2.5 Test methodology and test results shall be documented and provided to the flooring contractor, general contractor, owner and/or architect.
- 3.2.6 If concrete moisture conditions are outside the adhesive manufacturer's limits per section 5, do not commence installation. Allow the concrete to fully dry or apply a 100% solids epoxy Moisture Mitigation System. Although Floorazzo Tile LLC

does not endorse or prefer any manufacturer in particular, we provide the following list of leading Moisture Mitigation System manufacturers for information purposes. It is recommended that the manufacturer of the mitigation system selected be contacted to confirm compatibility with the adhesive used for the installation. Floorazzo Tile LLC cannot accept responsibility for incompatible product selection for moisture mitigation and adhesives. The selection of adhesives is dictated by the substrate to be covered not the preferred moisture mitigation product.

Ardex: 724.203.5000 (www.ardex.com)

Bostik: 978.777.0100 (www.bostik-us.com)

Koester: 757.425.1206 (www.koesterusa.com)

Mapei: 800.426.2734 (www.mapei.us)

3.3 Wood Substrates:

3.3.1 For wood subfloor systems, ensure the subfloor conforms to the guidelines of ASTM F1482, *Guide to Wood Underlayment Products Available for Use Under Resilient Flooring*. A typical wood subfloor system includes a joist spacing of 16" on center with a double layer subfloor/underlayment system - minimum one inch thickness. Check all treads and risers for any loose or moving boards. Secure with screws to prevent movement.

3.3.2 Wood subfloor systems shall be suspended at least 18" above the ground. Crawl spaces shall have adequate cross ventilation and a moisture barrier shall be used on the ground to reduce humidity from ground moisture panels or A/C grade plywood.

3.3.3 Consult ASTM F 1482 or underlayment manufacturer for recommendations regarding plywood thickness, fastener selection and spacing and conditioning of panels.

3.4 Do not install over existing resilient stair treads and risers.

3.5 Other substrates such as terrazzo, stone, ceramic tile, metal: Read the product data for the appropriate adhesive to determine the necessary surface prep. Contact Floorazzo Tile LLC for further information if there is any question on surface suitability.

3.6 Do not install over non-compatible substrates such as asphalt, bituminous or asphalt-saturated material.

3.7 Floorazzo™ is a flexible product that conforms to the substrate beneath it, and it requires special attention to substrate preparation. Any irregularities in the substrate or improper substrate leveling and/or preparation may cause tiles to appear to be out of square or have unacceptable lippage (differences in elevation between adjacent tile edges). In addition to the general requirements stated in the following subsections regarding substrate preparation, successful installation of Floorazzo™ requires a specific flatness tolerance of no greater than 1/8" in 10'.

4. SITE CONDITIONS

4.1 Install new Floorazzo™ Stair Treads and Risers after all other trades have completed their work.

4.2 Protect areas where treads and risers shall be installed from all traffic before, during and after installation.

4.3 Extremes of temperature and humidity can affect Floorazzo™ Stair Treads and Risers and can alter the proper cure of patching compounds and adhesives. Building shall be between 65°F and 80°F for 48 hours before installation, during installation and for 48 hours after installation. Thereafter, maintain a minimum temperature of 55°F and relative humidity of 35% - 65%.

NOTE: If a system other than a permanent HVAC system is utilized, it must provide constant temperature and humidity control at specified levels for the specified time frame.

- 4.4 Maximize fresh air ventilation by using exhaust fans at point of use. Face fans out of the area where flooring is being installed, not into the area. Never force dry adhesives or patching compounds by using fans.

5. ADHESIVE AND ACCESSORIES

- 5.1 Floorazzo™ Stair Treads and Risers are adhered using the recommended adhesive for the identified substrate:
 - 5.1.1 Concrete or Wood: Mapei Ultrabond ECO 373 pr ECO MS4 using a 1/16"x 1/16"x 1/16" square notch trowel. Maximum RH of 90%.
 - 5.1.2 Concrete, Underlayment grade plywood or Metal: Spray-Lock 6500 Max. RH 95%
- 5.2 Follow ASTM F 2170 Relative Humidity Test for concrete substrates.

6. INSTALLATION

- 6.1 Stair Treads, Nosing, and Risers are available in oversized castings and will need to be cut to fit. This process is similar to rubber treads and risers. It is recommended to use cardboard or Ram Board to make a template of the Riser and Stair Tread to obtain the proper fit. A tool is available to help with this process called the Step Doctor. The use of a template will insure a tight fit. See section 9 for Installation Tools Checklist.
- 6.2 Landings should not be installed until the stairs have been installed and the adhesive set.
- 6.3 Begin templating the riser of each stair at the top of the staircase followed by the tread. Continue working downward. The edge where the riser and tread meet will be covered by the nosing. The Tread must not extend past the riser below to prevent cracking. It is possible that templates can be used multiple times if the steps are consistent in size. Every step must be checked to obtain a proper fit. It is important to scribe the templates tight to the contours of the steps as the traced lines will be used as cut lines.
- 6.4 Using the templates created, place the template on the top of the Floorazzo and trace a pencil line around the template. Green FrogTape can be used to hold the template in place or simply have another person hold the template in place. The line traced on the Floorazzo will become the cut line once cutting begins.
- 6.5 Remove the template and use a grinder with a diamond cutting wheel to cut the Floorazzo™ Stair Riser on the pencil lines. (The grinder must have a dust shroud and be connected to a HEPA vacuum that meets HEPA requirements under Table 1 for Osha Silica Standards)
 - 6.5.1 Clean the dust from the bottom of the Floorazzo™ Stair Riser
 - 6.5.2 Dry lay the Floorazzo™ Stair Riser in place and check the fit.
 - 6.5.3 Once the proper fit is achieved, use the same process for the Tread.
 - 6.5.4 Repeat this process for Risers and Treads until all pieces are cut. Measure and cut nosing as you go. Be sure to number each piece and store on a flat surface while cutting other pieces. If pieces are left dry fit on the steps be sure to inspect for color variation or other irregularities as you are cutting to minimize additional cutting.
- 6.6 It is the installer's responsibility to inspect the dry laid installation and notify the appropriate authority of any imperfections, irregularities, or color variation prior to final adhesive installation.
- 6.7 Proceed with the adhesive installation only after reading adhesive manufacturer's data sheets and instructions for use. Be sure you are using the appropriate adhesive for the substrate the Treads and Risers are being installed on. It is recommended to conduct a test with the adhesive to determine open time. This will determine the amount of time needed to cover open adhesive and dictate the number of pieces that can be set at one

time. If using a spray adhesive like Spray-Lock 6500, metal and concrete substrate can be quickly covered by applying the adhesive to the back of the precut Floorazzo Treads and Risers. This method can make the actual installation go very quickly. By laying the precut pieces in numerical order face down on plastic and spraying the adhesive, you are limited only by the open time of the adhesive to get all pieces installed.

6.7.1 Spread or spray the appropriate adhesive for the substrate being covered following instructions on adhesive label. If using Mapei Ultrabond ECO 373 or ECO MS4, be sure to conduct a test spot to determine how long it takes before it dries to determine working time.

6.7.2 Apply adhesive in small areas at a time so that access to the surface can be maintained and adhesive can be covered while still wet.

6.7.3 Important note: The appropriate open time is determined by the adhesive selected and the substrate being covered. This determines how many Treads and Risers will actually be installed at a time. Using a spray adhesive applied on the back of the precut Treads and Risers allows unrestricted access to all the substrate surfaces. The speed of installation is increased but the number of pieces sprayed is determined by the open time allowed by the adhesive manufacturer. When using Mapei Ultrabond ECO 373 or ECO MS4, the application of adhesive is limited to what can physically be reached which is usually only two or three steps at a time. When planning your work be sure to consider the environmental temperature and the porosity of the substrate as both of these affect open time of the adhesive.

6.7.4 Never use fans or apply less adhesive than required to speed up installation.

6.8 When using the "wet method" of installation use a finger to test the adhesive to see if it is moist to the touch before installing the treads and risers. If there is no adhesive transfer to a finger, do not set material into adhesive; the adhesive has been open for too long. Remove the adhesive and spread new adhesive.

6.8.1 A hand roller should be used in place of the 100 lb roller after each tread and riser is placed into the adhesive.

6.8.2 Start the adhesive part of the installation at the top of the staircase and work down. The adhesive, tiles, treads, and room should be maintained at 65°F - 80°F for a minimum of 48 hours prior to commencement of installation.

6.8.3 Install Nosing after all Treads and Risers are installed. Use Johnsonite #930 two-part epoxy caulking compound to completely fill the void between the internal angle of the Stair tread and the external edge of the step. It is important to read and follow the manufacturer's product data sheet.

6.8.4 Allow 24 hours for the stair treads and risers to be completely set before allowing foot traffic.

6.7.6 Caulk the seam where the Floorazzo™ Riser and Floorazzo™ Stair Tread meet using a color coordinated silicone caulking.

7. CLEAN UP AND FINAL FINISH

7.1 Sealing: Do not leave the treads and risers unprotected without applying sealer. A penetrating sealer protects the floor and provides a base coat for the application of floor finish.

7.1.1 Remove all surface soil, debris, sand by vacuuming.

7.1.2 Clean treads and risers with a neutral pH (7-8.5) detergent, such as Diversey Stride, Hillyard Super Shine All, or equivalent.

7.1.3 Apply cleaning solution with a mop and bucket, (or sponge) using as little water as possible. Do not saturate the tread.

7.1.4 If necessary, remove cleaning solution with a wet-vac.

7.1.5 Rinse with clean water and allow floor to dry thoroughly. Surface must be completely dry before applying sealer.

- 7.1.6 Apply penetrating sealer, such as Diversey Plaza Plus or equivalent, with a clean finish mop or finish applicator. NOTE: Only thin coats are required (less is more)
- 7.1.7 Allow first coat to dry thoroughly (at least 30 minutes) before applying second coat.
- 7.1.8 Apply second coat of sealer.
- 7.1.9 Apply Floor Finish if desired after second coat of sealer is completely dry, see section 8.
- 7.2 Floor finish such as Pioneer Eclipse Diamond Shine Floor Finish or equivalent can be applied immediately after the sealer. If the floor finish is not applied immediately after the sealer, thoroughly clean and rinse the treads and risers before applying floor finish. Follow Floorazzo™ Maintenance Instructions, available from Floorazzo Tile LLC

8. INITIAL MAINTENANCE

- 8.1 If construction is to continue after the floor is installed, the floor must be protected from damage. After the Floorazzo™ Stair Treads and Risers are installed and the final coat of sealer has completely dried, sweep or vacuum the floor and then cover with brown Kraft paper to protect. If floor will be exposed to rolling traffic, cover the Kraft paper with plywood or hardboard panels.
- 8.2 Entrance matting: Because 90% of all dirt in a building comes in on footwear, Floorazzo Tile LLC strongly recommends installing and maintaining entrance matting (preferably permanently installed) at all outdoor entrances (20-30 linear feet for major entrances; less for infrequently used entrances). Doing this will improve indoor air quality, reduce flooring maintenance costs, and lengthen the life of your interior floors.
- 8.3 Sunlight: Direct sunlight can damage most interior finishes so proper protection in the form of window coverings is recommended.
- 8.4 On-going Maintenance: For recurring maintenance, download Floorazzo™ Maintenance Instructions at www.floorazzo.com

9. INSTALLATION TOOLS CHECKLIST

- 9.1

<input type="checkbox"/> Job site protection: Plastic, drop cloths, tape, etc.	<input type="checkbox"/> Pencil
<input type="checkbox"/> Personal Protection: Gloves, safety glasses, booties, suit, etc.	<input type="checkbox"/> Trowel
<input type="checkbox"/> Cleaning: Mop, bucket, denatured alcohol, rags	<input type="checkbox"/> Cardboard or Ram Board for template material
<input type="checkbox"/> Diamond Cutting Wheel	<input type="checkbox"/> Carpenters' Square
<input type="checkbox"/> Grinder with dust shroud and HEPA vacuum that meets HEPA requirements for Table 1 under OSHA silica Standard	<input type="checkbox"/> Silicone Caulk
<input type="checkbox"/> Wet/Dry Vacuum	<input type="checkbox"/> Floor Finish
<input type="checkbox"/> Hand Roller	
<input type="checkbox"/> Green FrogTape	

