



SAFE-T FIRST®

INSTALLATION & MAINTENANCE INSTRUCTIONS

Tactile Warning Strips

INTRODUCTION

These instructions are written as a guide to be used by professional installers when installing Tarkett products. These instructions, combined with our adhesives and flooring products, create a system. Utilizing this system will ease the installation process and provide the customer with a completed product that will perform to its intended purpose. Always visit www.tarkettna.com for the most current installation and maintenance instructions. Technical videos and tip sheets are also available. Contact Tarkett Technical Services at (800)-899-8916 with any questions.

UL 1994-COMPLIANT PHOTO-LUMINESCENT EGRESS PATH MARKING SYSTEMS, listed by Underwriters Laboratories, Inc.

1. **Activation:** Minimum 1 foot candle (10.8 Lux) of ambient fluorescent lighting per 2012 IBC Section 1024.5 Illumination.
2. Install Safe-T-First photo-luminescent egress path marking systems only in locations where an external illumination source is present, is deemed reliable and whose controls are accessible only to authorized personnel. This reliable illumination source is to be energized at all times during building occupancy.
3. Do not use the system where ambient illumination level is less than 1 foot candle (10.8 Lux).
4. Check with your applicable local or national installation codes such as, IBC-International Building Code, to perform periodic visibility test.

HANDLING AND STORAGE

1. All Tarkett products must be stored in an indoor, climate controlled space and be protected from the elements. Temperature must be maintained between 65°F (18.3°C) and 85°F (29.4°C) with a relative humidity between 40% and 60%.
2. All cartons must be stored on a dry, flat, level surface. Cartons must be carefully stacked squarely on top of one another and never be stored on edge. Take caution not to over stack the cartons and never double stack pallets. Always protect carton corners from damage by tow-motors and other traffic.
3. Tarkett flooring and adhesives must be site conditioned at room temperature for 48 hours prior to, during, and after installation. Room temperature must be maintained between 65°F (18.3°C) and 85°F (29.4°C) and the ambient relative humidity must be between 40% and 60%. We strongly recommend the permanent HVAC system be fully operating. **NOTE:** If a system other than the permanent HVAC source is utilized, it must provide proper control of both temperature and humidity to recommended or specific levels for the appropriate time duration as stated above.
4. Once the installation is completed, the service temperature of the space must never fall below 55°F (12.8°C).
5. In areas that are exposed to intense or direct sunlight, the product must be protected during the conditioning, installation, and adhesive curing periods, by covering the light source.
6. Tarkett products are not recommended for exterior use. Exposure to excessive UV rays can result in fading, degradation, and/or color variation.
7. The highest quality of materials and workmanship is employed in the manufacturing of Tarkett flooring and careful inspection is made before shipment. A quality installation is the responsibility of the installer. It is the installer's responsibility to verify the accuracy of the order and to ensure the materials are checked for damage, defects, and satisfactory color match. An authorized Tarkett distributor or Tarkett representative must be notified of any defects before installation proceeds. **Tarkett will not pay for labor or material costs claimed on installed materials with visual defects.**
8. Tarkett cannot accept responsibility for any loss or damage that may result due to processing or working conditions and/or workmanship outside our control.
9. Users are advised to confirm the suitability of this product by their own tests.

GENERAL SUBFLOOR PREPARATION

1. **All subfloors** must be permanently dry, clean, smooth, and structurally sound. The surface must be free of all dust, loose particles, solvents, paint, grease, oil, wax, alkali, sealing/curing compounds, old adhesive, and any other foreign material, which could affect the installation and adhesive bond to the substrate. Permanent and non-permanent markers, pens, crayons, paint, or similar marking tools used to mark the substrate or the back of the resilient flooring material will cause migratory staining. Subfloor contamination or markings that bleed through the flooring material causing discoloration or staining are excluded from the Tarkett Limited Warranty. All substrate contaminants must be mechanically removed prior to the installation of the flooring material. **NOTE: Do not use liquid solvents or adhesive removers.**

Minimum temperature of the substrate must be 60°F (15.6 °C). Substrate temperature should be a minimum of 5°F higher than the dew point temperature.

Caution: Do not use oil-based sweeping compounds.

Fill all depressions, cracks, and other surface irregularities with a good quality Portland cement based underlayment patching compound appropriate for this purpose.

Tarkett does not recommend installing over existing resilient floors. All existing flooring and adhesives must be mechanically removed prior to installing the new flooring material – **Do not use chemical adhesive removers or solvents.** Refer to the Resilient Floor Covering Institute's (RFCI), *Recommended Work Practices for Removal of Existing Resilient Flooring* for best work practices.

Caution: Some resilient flooring products and adhesives contain "asbestos fibers" and special handling of this material is required.

2. **Concrete subfloors** must be constructed as recommended by the American Concrete Institute's ACI 302.2 *Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials* and prepared in accordance with ASTM F 710 *Standard Practice for Preparing Concrete Floors to Receive*

Resilient Flooring.

Do not install Tarkett flooring over expansion joints, or other moving joints in the substrate. These joints must be respected and should not be filled with products that are not intended for that purpose. Contact an expansion joint cover manufacturer to meet specific flooring conditions.

All concrete subfloors must be tested for moisture and pH (alkalinity):

Moisture testing must be conducted in accordance with ASTM F 2170 *Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes* or ASTM F 1869 *Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride*. Following ASTM F 2659 *Preliminary Evaluation of Comparative Moisture Condition of Concrete, Gypsum Cement and Other Floor Slabs and Screeds Using a Non-destructive Electronic Moisture Meter* can provide qualitative information prior to performing ASTM F 2170 or ASTM F 1869.

Acceptable moisture limits can be found in the adhesive section below, on the adhesive label, and in the adhesive specifications online. Test results must not exceed the limits of the adhesive.

If the tests results exceed the limitations, the installation must not proceed until the problem has been corrected. Tarkett does not recommend or warrant any particular product or procedure for the remediation of high moisture in concrete substrates. There are several companies that manufacture products suitable for moisture remediation. We suggest you refer to the current ASTM F 710 *Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring* and ASTM F 3010 *Standard Practice for Two Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Flooring Systems*.

A pH test for alkalinity must be conducted. Acceptable pH range of the adhesive can be found in the adhesive section below, on the adhesive label, and in the adhesive specifications online. Results must not exceed the limits of the adhesive. If the test results are not within the acceptable range, the installation must not proceed until the problem has been corrected.

- 3. Wood subfloors** must have a minimum 18" (47 cm) of cross-ventilated space between the bottom of the joist and ground. Exposed earth crawl spaces must be sealed with a polyethylene moisture barrier.

Subfloors must meet local and national building codes. Trade associations, such as the APA -The Engineered Wood Association, offer structural guidelines for meeting various code requirements. Refer to ASTM F 1482 *Standard Practice for Installation and Preparation of Panel Type Underlayments to receive Resilient Flooring* for additional information.

Single Floor Wood Construction and Tongue and Groove subfloors must be covered with 1/4" (6.4 mm) or 1/2" (13 mm) APA approved underlayment plywood. Use 1/4" (6.4 mm) thick underlayment panels for boards with a face width of 3" (76 mm) or less. For boards wider than 3" (76 mm) face width use 1/2" (13 mm) underlayment panels.

Countersink nail heads and fill depressions, joints, cracks, gouges, and chipped edges with a good quality Portland cement based patching compound designed for this purpose.

Do not install over OSB (Oriented Strand Board), particle board, chipboard, lauan or composite type underlayments.

- 4. Terrazzo and Ceramic floor** surface must be thoroughly sanded to remove all glaze and waxes. Remove or replace all loose tiles and clean the grout lines. Use a good quality Portland cement based leveling compound to fill all grout lines and other depressions.
- 5. Steel floor** surface must be mechanically abraded to assist with the adhesive bond. The floor must be cleaned to remove all dirt, rust and other contaminants that could affect the adhesive or the bond of the flooring material to the substrate. Surface must be primed with a rust inhibitor. It is important to follow the non-porous installation instructions when installing over metal.
- 6. Concrete floors equipped with a radiant heating system:** Turn the heat down to 65°F (18.3°C) for at least 48 hours before installation. Heat may be gradually returned to operating temperature 48 hours after installation. Surface temperature must not exceed 85°F (29.4°).
- 7. An adhesive bond test** must be performed using the actual flooring materials and adhesive to be installed. The test areas must be a minimum of 36" x 36" and remain in place for at least 72 hours and then evaluated for bond strength to the concrete.

INSTALLATION

- 1. Adhesive Application:** See adhesive chart below and follow adhesive label instructions for proper use.
- 2. Installation Procedure:**
 - a.** Tactile Warning Surface material must be uncoiled to lay flat for at least 24 hours at 70°F (21.1°C) prior to installation.
 - b.** The product should be trimmed to fit, dry laid, and inspected prior to adhesive application.
 - c.** If the installation requires compliance to ANSI A117.1, position the first section of tactile warning surface material with the striping running parallel to the leading edge and extending across the entire width of the hazardous location.
 - d.** Position two additional strips of material adjacent to the first piece to create a total depth of 3 feet (.91 m) of tactile warning surface material.
 - e.** After visual inspection of the dry laid installation, lay the three sections of pre-trimmed tactile warning surface material aside and apply adhesive to the substrate.
 - f.** Apply the adhesive to the substrate and allow proper open time.
 - g.** Do not force strips together creating a ledge condition at the seams and corners.
 - h.** When using 975 Two-Part Urethane or 996 Two-Part Epoxy Adhesive the installer **MUST** work off the flooring. Sliding tactile warning strips will result in forcing the adhesive out between the seams.
 - i.** Periodically, lift the corner of an installed strip to ensure proper transfer of adhesive.
 - j.** Roll floor in both directions with a 100 pound three-section roller. Use a hand roller in areas that cannot be reached with a large roller.
 - k.** Inspect the floor surface, especially seams, and remove any adhesive on the surface.

3. Post Installation Floor Protection:

We recommend that the installation of new flooring material not be performed until all the other trades have completed their work. Proper precautions must be taken during and after the installation process to avoid damage to the newly installed flooring.

a. Immediately after installation:

- All traffic must be restricted for a minimum of 24 hours after installation.
- All heavy traffic, rolling loads, pallet jacks, and furniture or appliance placement must be restricted for a minimum of 72 hours after installation.
- Flooring must be swept or vacuumed to remove loose dirt and grit prior to the application of proper floor protection. (Do not trap dirt and grit under floor protection.)
- Apply floor protection suitable for construction foot traffic such as: undyed heavy Kraft paper, Ram Board, 1/8" Masonite panels, or similar product designed for resilient floor protection.

b. 72 hours after installation:

- Areas that will receive heavy traffic, rolling loads, pallet jacks, and furniture or appliance placement must be protected with ¼" thick Masonite or similar wood panels.
- The floor must be swept or vacuumed prior to the placement of the floor protection panels. (Lightly damp mop if necessary)

NOTE: Do not use plastic or other non-porous materials to protect the newly installed flooring that could prevent the adhesive from drying properly.

ADHESIVE CLEAN UP

Excess adhesive should be removed during the installation process.

965™ Flooring & Tread Adhesive

- Use a clean white cloth dampened with water to remove wet adhesive from floor covering and tools.
- Dried adhesive may require the use of denatured alcohol applied to a clean white cloth. (Follow manufacturer's precautions when using denatured alcohol.)

975™ Two Part Urethane Adhesive

996™ Two Part Epoxy Adhesive

- Before the adhesive sets, remove excess adhesive from flooring and clean tools with denatured alcohol applied to a clean white cloth. (Follow manufacturer's precautions when using denatured alcohol.)
- Do not allow adhesive to dry on the flooring surface.
- Removing dried adhesive may cause irreparable damage to the flooring surface.

MAINTENANCE

1. Wait 72 hours after installation before performing initial cleaning.
2. A regular maintenance program must be started after the initial cleaning.
3. Thoroughly sweep or vacuum the flooring to remove all loose dirt and grit.
4. Prepare a cleaning solution using a pH neutral cleaner.
5. The dilution ratio depends on light to heavy soil conditions. Follow manufacturer's label instructions.
6. Apply the cleaning solution with a nylon or rayon mop.
7. Let the cleaning solution dwell for 5 to 15 minutes (dwell time is based on soil conditions of the floor). **IMPORTANT** – Do not allow the solution to dry.
8. Agitate solution with mop, then wet vacuum or mop up cleaning solution.
9. Rinse the floor thoroughly with clean water, remove all water by vacuum or mop.
10. Allow the flooring to dry completely.
11. If desired, one or two coats of a liquid, acrylic floor finish may be applied to improve gloss level and ease cleaning. Apply the floor finish to the floor according to the manufacturer's label instructions

ADHESIVE SELECTION CHART

Products	Adhesive	Application and Coverage		Moisture / pH Limits			Notes
		Porous	Non-Porous	RH%	CaCl ₂	pH	
Tactile Warning Surface	965 Flooring and Tread Adhesive	1/16 x 1/16 x 1/16 SQ 125 – 150 sq. ft. per gallon	1/16 x 1/16 x 1/16 V 150 – 175 sq. ft. per gallon	90%	7 lbs.	9	The 965 adhesive is sensitive to substrate porosity. Determine substrate porosity and follow the adhesive label instructions regarding porous and non-porous substrate drying times prior to the installation.
Tactile Warning Surface	975 Two-Part Urethane Adhesive	1/16 x 1/16 x 1/16 V 150 – 175 sq. ft. per gallon	1/16 x 1/16 x 1/16 V 150 – 175 sq. ft. per gallon	90%	8 lbs.	9	For application in areas subject to heavy point loads, rolling loads, topical moisture, or temperature extremes.
Tactile Warning Surface	996 Two-Part Epoxy Adhesive	1/16 x 1/16 x 1/16 V 150 – 175 sq. ft. per gallon	1/16 x 1/16 x 1/16 V 150 – 175 sq. ft. per gallon	85%	7 lbs.	9	For application in areas subject to heavy point loads, rolling loads, topical moisture, or temperature extremes. Do not use on wood or metal substrates

Tarkett North America

Technical Services Department
 30000 Aurora Road
 Solon, OH 44139
 800.899.8916 Fax 440.632.5643
info@tarkettna.com
www.tarkettna.com