



Mission Critical / ESD Floor Tiles

ElectraTile & Titanium ESD Tiles for Static Control

Installation Instructions

Revision Date: 05/01/2017, added 7, added wooden subfloors

Method of Operation: ESD Tiles are made of a unique electrically conductive vinyl that is installed using a conductive adhesive that is attached to an electrical ground. Static electricity (typically generated as a by-product of movement) flows to the top surface of the tiles, through the vinyl, into the conductive adhesive and subsequently discharged at a safe controlled rate to the electrical ground system of the building.

Note: The following instructions should be reviewed prior to installation. Every effort has been made to provide accurate and reliable information in this document. This document is intended as a guide for our customer's use with our recommended tools and materials. United SCP cannot accept any responsibility for loss or damage that may result from the use of this information due to the possibility of variations of processing or working conditions and/or workmanship beyond our control. **Note:** ESD Tile should not be used in exterior applications, golf shops, locker rooms, food processing facilities or commercial kitchens.

1. Basic Requirements: Flooring must be installed at the final stage in any type of construction. Area lighting and HVAC must be running and fully functional. Measure the room, add an overage of 3 to 6% and place your order.

IMPORTANT! United makes every effort to ship the correct product however **VERIFY** the material you have received against your purchase order to United. Contact us immediately should you receive the wrong material. United SCP is not responsible for the installation of the incorrect material, color or dye lot due to errors in fulfilling your order.

If your shipment has been sent in a palletized form insure that the tiles have been received flat and have not been stored on their side. If the shipment has been damaged in any way take photos and report the damage to the driver or freight carrier immediately. Mark the damage on the bill of lading and contact United SCP's freight department at 719 676 3928 extension 7001.

2. Room Temperature, Tile Preconditioning and Storage: Allow the flooring time to acclimate. Flooring materials and room temperature must be maintained within 60° F / 75° F (18 C and 25 C) for at least 5 days prior to, during and after the installation. Store the tiles in same room as the install.

Store the tiles flat (not on edge). **IMPORTANT!** United makes every effort to ship the correct product, contact us immediately should you receive the wrong material. United SCP is not responsible for installation of the incorrect material, color or dye lot due to errors in pulling your order.

3. Moisture Testing of Concrete Slab: Substrates to receive flooring must be free of moisture. Test the concrete prior to installing the tiles using the

Anhydrous Calcium Chloride Test Method per ASTM F1869. The results must not exceed 5 lbs. / 1000sq ft. / 24 hour period. If excessive moisture is present in the concrete do not proceed with the installation. United SCP is not responsible for moisture related installation failures.

4. Adhesives:

ElectraTile Adhesive: United SCP recommends using only LG-5100 ESD Conductive Adhesive for ElectraTile. [Please click here for detailed instructions on using the LG-5100](#) or use instructions as printed on the container.

Titanium Tile Adhesive: United SCP recommends using only KE-2000 Conductive Adhesive for Titanium Series ESD Flooring. [Please click here for detailed instruction on using the KE-2000](#) or use the instructions printed on the container.

5. Recommended trowel size:

LG-5100 is typically applied with a 1/16" x 1/16" x 1/16" U notch trowel. See [details](#) on adhesive instructions for more information.

KE-2000 is applied using a 23/80 V notch blade. The blades are provided at no charge with each pail of the KE-2000. These blades are designed to fit a Wolff brand Ergo Star trowel handle and are available on line by [clicking here](#).

SUBSTRATE CONDITIONS: Substrate conditions such as flatness are important! Relatively minor deviations may cause shadow through the finished flooring. All substrates to receive the ESD flooring must be clean, completely dry and free of damage such as chips, pits, sealers, paint, oil and grease. Permanent markers used on the substrate may eventually bleed through the tiles. Remove these



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marks with Goof Off or similar prior to proceeding with your installation.

6. CONCRETE SUBSTRATES: General Information; Defects such as pits, gouges and deep scratches that are found in the concrete substrate must be corrected. Newly poured concrete slabs contain excessive moisture residues. Always test the vapor emissions of the concrete prior to installing ESD vinyl flooring (see section 3).

6.1 All concrete subfloors must meet the requirements of the latest edition of ASTM F 710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring. The concrete subfloor design must also meet and / or exceed both the static and dynamic load requirements for the intended use of the space.

All concrete slabs must meet the requirements for *ACI with a compressive strength of > 3,500 psi (24 MPa). Please refer to *ACI 302.1R-96, Guide for Concrete Floor and Slab Construction, PP.5 and 22.

All concrete substrates must be free of paint, grease, wax and materials that may interfere with the bond strength of the adhesive.

Please Note: In the event of underlayment or concrete failure the responsibilities for warranties and / or performance guarantees are the responsibility of the subfloor subcontractor not with the manufacturer of the resilient flooring.

6.2 Existing Resilient Flooring: Installing United SCP vinyl Tile over existing resilient flooring is not recommended.

WARNING: Existing resilient flooring should never be cut, sawn, mechanically mended or dissolute. This operation may cause asbestos or asbestos dust diffusion. Inhaling asbestos can cause a number of serious diseases. Smoking in asbestos dust environment could cause serious lung injury. Check that the removal process is followed under the laws and regulations required by federal, state and local governments. Asbestos removal must be performed by asbestos specialty professionals who are properly trained and possess all required licenses.

WARNING: Adhesive Removal once resilient flooring is removed, soluble asphalt adhesives are commonly found which are not easily recognizable. When it is uncertain whether asbestos residue is contained, you must treat it as it does contain

asbestos. Asbestos inhaling may cause serious injury like asbestos pneumonia. Smoking where asbestos dust is present could cause serious lung injury. Suspend the operation immediately if asbestos contamination is uncertain and consult with an asbestos removal professional.

6.3 Curing and Parting Compounds: Curing and parting compounds on concrete substrates where ESD flooring will be installed may damage adhesion resulting in installation failure. Most sealers and parting compounds may be removed by Diamabrushing or Diamond Grinding the substrate.

6.4 Gypsum Based Underlayment: Gypsum base underlayments and substrate leveling are not recommended for use with ESD vinyl Tiles.

6.5 Floor Fills / Toppings: Resin-reinforced self-leveling cement underlayments are recommended by their manufacturers for use as floor fills and / or toppings. NOTE: All recommendations and guarantees regarding the suitability of these products and their performance as underlayments for resilient floor coverings are the responsibility of the manufacturer and the installer of the underlayment system being used.

6.6 Portland Based Patching Procedures for concrete: Follow directions provided by the manufacturer.

6.7 Radiant Heated Floors: Please contact United SCP Inc. should installation be required over a radiant heated concrete substrate.

6.8 Expansion Joints: Expansion joint covers are recommended by United SCP.

7. WOOD SUBSTRATES: Wood Subfloors must have a minimum of 18 inches of cross ventilated space between the bottom of the joist and the ground. Exposed earth crawl spaces should be sealed with a polyethylene moisture barrier. Subfloors should meet local and national building codes. Trade Associations such as the APA – “The Engineered Wood Association” offer structural guidelines for meeting various code requirements. Single wood tongue and groove subfloors should be covered with ¼” or ½” APA approved underlayment plywood. Use ¼” thick underlayment panels for boards with a face width of 3” or less. For boards wider than 3” face width use ½” underlayment panels. Countersink nail heads and fill



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depressions, joints, cracks, gouges and shipped edges with a high quality Portland based patching compound. **Note:** Do not install over OSB, particle board, chipboard, Lauan or composite type underlayments. Do not install over:

- Eroded or wet areas.
- To crooked Floors or vibration sensed floorings.

8. Bond Strength Testing: A bond test shall be performed on all substrates prior to full scale application of the ESD Tiles. Install a few pieces of the flooring material selected for the installation and adhere to the substrate with the recommended adhesive. If after 72 hours an unusual amount of force is required to lift the material from the substrate, and if after doing so, the adhesive has transferred to both the substrate and to the back of the flooring, the flooring can be considered “securely bonded.”

9. Install Grounding Strips: Our esd flooring products are easy to ground and ground foil tape is included at no charge with each order. [For detailed instructions on grounding ESD floor Tile please click here.](#)

10. Installation Pattern and Layout: Use a pair of perpendicular reference lines for establishing your layout instead of relying on measurements from walls, which are neither straight nor square to each other. To ensure the reference lines are square, use a 3-4-5 triangle rule as follows:

Establish your first reference line by measuring across opposite sides of the room. Mark the center of each side and then snap a chalk line between the two marks.

Measure and mark the center of that line. Then use a pencil, a framing square, and a straightedge held against its shorter leg to mark a second 4-foot-long line perpendicular to the first line.

Before snapping a second line across the room, insure the angle formed is truly 90 degrees by measuring out 3 feet from the intersection and marking with a penciled line. Then measure out 4 feet from the intersection and mark the spot on the chalk line. Measure the distance between the 3-foot and 4-foot marks.

The distance should be 5 feet — the 3-4-5 rule. If it isn't, make an adjustment and pencil a new line. Now snap a chalk line across the room that falls directly over the penciled line. After you have reference lines,

use them to establish layout lines, which actually guide tile placement.

10.1 Application over porous concrete: Spread adhesive with a notched trowel in a size indicated by the pail of adhesive used. Do not use a larger trowel than recommended or apply excessive amounts of adhesive, since this can slow drying and cause bleeding. Do not apply either of these flooring adhesive with a roller or brush.

10.2 Application over dense non porous concrete: ESD flooring adhesives work best on porous substrates. If the substrate is not porous remove the sealers using a DiamaBrush prep tool or diamond grinder.

NOTE: ESD flooring tile should be placed into the adhesive while it is wet to slightly wet (slight transfer to the fingertip). **ElectraTile is a directional tile.** Insure that all arrows on the back of the tiles be placed in the same direction. The ESD Tiles should be rolled utilizing a 100 pound vinyl flooring roller as soon as it is determined that shifting of tile or bleeding of adhesive will not take place. Roll again 1 hour after installation.

NOTE: The adhesive's bond strength develops and increases over a period of several days. It is the responsibility of the user to determine whether or not the subfloor to be covered is porous. To determine if a subfloor is porous place a few drops of water in each of several areas. If the subfloor is porous, the water should be absorbed within 5 minutes.

Clean-up: Soapy water followed by Mineral Spirits.

QUESTIONS / ASSISTANCE: Call United SCP Customer Service at (719) 676 3928 with any questions you may have.

NOTICE:

1. United recommends always performing moisture testing, bond testing, and alkali testing and documenting the results before installing resilient flooring over concrete.

2. Do not install Titanium or ElectraTile Tiles over existing resilient flooring. Should this be a requirement consider using Titanium Sheet Vinyl and our peel and stick adhesive process.



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3. Using chemical compounds or waterproofing treatments on concrete substrates where Alkalinity / hydrostatic pressures are apparent or water permeation is expected shall not be an alternative. Installation must be suspended even though the appropriate action is taken and installation risk be discussed with all appropriate associates.

4. Do not install over lightweight concrete or gypsum base that cannot hold 100lb / cubic foot (1602kg / m³). Before tile installation, reinforce light weight concrete with at least 1 (25mm) thickness light weight concrete according to standard concrete mixing recommendations and consult with a concrete professional.

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