

# Titanium ESD Sheet Vinyl

Installation Instructions for Uzin KE 2000 SL liquid adhesive and Titanium Sheet Vinyl over concrete. For instructions in covering VCT, Steel and other hard surface flooring with our URAS Peel and Stick Adhesive [please click here](#)

Revision Date: 2/10/2021



**Product Overview and How it Works:** Titanium ESD Flooring is manufactured with a specific range of electrical conductivity and is used in environments where static control is desirable.

The uncontrolled discharge of static electricity is detrimental to static sensitive electronic components and may provide a source of ignition for fine powders and energetics. Titanium is provided in a sheet vinyl and in a tile form.

Titanium is manufactured with a hard, wear resistant, semi-gloss, anti-slip top surface securely bonded to a black, full surface static conductive backing.

Titanium ESD Flooring is installed using a conductive adhesive that is attached to electrical ground. Static electricity (typically generated as a by-product of movement) flows through the top surface of the flooring, into the conductive (black) backing of the vinyl, into the conductive adhesive and to an electrical ground all at a safe, controlled rate of speed.

**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 or misuse of this information due to the possibility of variations of processing or working conditions and/or workmanship that is beyond our control.

**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.

## **2. Receiving, Inspection, Storage and Preconditioning:**

**Receiving:** Large orders are shipped standing in crates. Smaller orders are shipped lying in cardboard cradles on a pallet. Inspect the shipment upon arrival. 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.

**Inspection:** The highest quality of materials and workmanship is employed in the manufacture of United ESD Flooring and careful inspection is made before shipment. However, a quality installation is the responsibility of the installer. It is the installer's responsibility to verify the accuracy of the order and to insure the materials are checked for consistent dye lots, damage, defects and satisfactory color and pattern matches. An authorized United Static Control Representative must be contacted and notified of any

defects before the installation proceeds.

United SCP is not responsible for the installation of the incorrect material, color or dye lot due to errors in fulfilling your order.

**Storage and Preconditioning:** Store the sheet vinyl standing (not on its side). Allow the material time to acclimate to that of the installation area. Flooring materials and room temperature must be maintained consistently at a range of 60° F to 75° F with the humidity at 60% or below for at least 5 days prior to and during the installation. The area receiving said ESD flooring should remain within this temperature range for the life of the flooring. **Note:** For ease of installation allow the sheets to lay flat overnight after rough cutting to length. **Note:** The material should lie flat and straight (even without the use of adhesive) prior to the installation.

**3. Moisture Testing of Concrete Slab:** Substrates to receive flooring must be free of moisture excessive moisture content.

Do not install when the relative humidity of the concrete slabs exceeds 80% (per latest version of ASTM F2170 In-Situ Relative Humidity Test). Substrate pH reading should be between 7.0 and 10.0

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If excessive moisture is present in the concrete do not proceed with the installation. Contact United for further information. United SCP is not responsible for moisture related installation failures.

#### 4. Adhesive:

**Titanium Sheet Vinyl Adhesive:** United SCP recommends using only KE-2000 **SL** Conductive Adhesive for Titanium Series ESD Flooring. [Please click here for detailed instruction on using the KE-2000 SL](#) or use the instructions that are printed on the container. For assistance with the KE 2000 SL please contact United SCP or Uzin Utz North America at 720 374 4810.

#### 5. Recommended trowel size:

**KE-2000 SL** is applied using a 23/80 V notch blade. The blades are provided at no charge with each 4 gallon 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](#). Note: in lieu of this special trowel blade, it is acceptable to use a 1/16" X 1/16" X 1/16" square notch adhesive trowel.

**SUBSTRATE CONDITIONS:** Substrate conditions such as flatness are important! Relatively minor deviations may 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 and non-permanent markers, pens, crayons, paint, etc. must not be used to write on the back of the flooring material or substrate as they may bleed through and stain the flooring material. If these contaminants are present on the substrate they must be removed prior to the installation of the flooring material.

**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 often contain excessive moisture residues and other contaminants. 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 using the KE-2000 SL 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. Should your needs require covering existing well bonded VCT, epoxy or Asbestos laden flooring please see [this method](#).

**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. Inhaling asbestos can cause serious injury. Smoking where asbestos dust is present can 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, diamond grinding or by other means.

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

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**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.

**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:** General Information: Wood substrates must be constructed with at least 18 inches (45.72 cm) of well-ventilated air space beneath. Installing resilient flooring on sleepers over concrete is not recommended. For recommended grades of plywood performance, refer to the APA - The Engineered Wood Association.

CAUTION: Do not install resilient flooring over:

- Eroded or wet areas.
- A nailed slab or adhesive secured plywood or concrete.
- Over fireproof plywood.
- To crooked Floors or vibration sensed flooring.

Panel Substrates: APA panels guarantee continuous product quality. Receive written descriptions and related documents from the APA for successful panel construction. Do not install ElectraTile flooring over OSB or Luan.

**8. Bond Strength Testing:** A bond test shall be performed on all substrates prior to full scale application of the ESD Sheet Vinyl. Install a few pieces of the flooring material selected for the installation and adhere to the substrate with the recommended adhesive using the trowel size indicated on the pail. 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 (approximately 50% on the flooring and 50% on the back of the tiles) the flooring is considered "securely bonded." It is the responsibility

of the installer to insure that the product is adequately bonded to the substrate.

**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:** The Architect may have provided a drawing showing the direction in which the material should be laid. In this case lay the sheet as directed. If the Architect has left this to the discretion of the flooring installer, layout your installation as you would for standard non ESD Sheet Vinyl paying attention to where seams will fall and avoiding such occurrences as seams in the middle of doorways. If large windows are installed it is a common practice to minimize the effect of the joints by laying the vinyl length wise (towards the windows).

## 11. Rough Cut Sheet Vinyl:

**Note:** Insure that the black backing of the Titanium Sheet Vinyl is clean and dust free prior to proceeding.

**a)** Install sheets in sequential order following roll numbers if presented on the labels of the flooring material.

**b)** Reverse sheets if desired (installer defined).

**c)** Cut sheets to length allowing approximately 3" excess for trimming to walls.

**d)** Cut the first piece to fit by freehand knife, direct scribing or pattern scribe method.

**e)** Position sheets so that the top sheet overlaps the bottom sheet by about 1" and double cut through both pieces. This is normally done using a hook blade knife and a straight edge. Insure that the loose lay floor is flat; bubble free and with tight seams before bonding the vinyl to the concrete.

**f)** Fold back the sheets approximately 1/2 of the length or width of the material and apply the adhesive to the area using the following techniques.

**Note:** For ease of installation allow the sheets to lay flat overnight after rough cutting to the length. The flooring material should lie flat and straight (even without the use of adhesive prior to installation).

**12. Application over porous concrete:** Spread the adhesive with a 23/80 notched blade trowel or a 16" X 1/16" X 16" square notch trowel (as is indicated on the

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pail of adhesive) place the sheet vinyl into the wet adhesive and roll. Do not use a larger trowel than is recommended or apply excessive amounts of adhesive as this can slow drying time and bleed through the seams. Do not apply the adhesive with a roller or brush.

**Note:** Ensure that severe curling, lifting edges and/or lifting corners are addressed during bonding.

## 12.1 Application over dense non porous concrete:

**Note:** ESD flooring adhesive bonds best on porous substrates. If the substrate is not porous remove the sealers using a DiamaBrush prep tool, diamond grinder or by other mechanical means.

**Standard Method:** Spread the adhesive. Allow the spread adhesive to dry until the surface becomes slightly tacky to the touch. Lay the vinyl into the adhesive and roll immediately with a 100 pound vinyl roller.

**Optional Double Drop Method** (for improved bond strength): Spread the adhesive with a 23/80 notched blade trowel (as is indicated on the pail of adhesive). Lay the vinyl sheet into wet adhesive and roll with a 100 pound vinyl roller. Immediately fold the vinyl sheet back and leave open until adhesive becomes slightly tacky to the touch. Once proper adhesive tack takes place accurately re-lay the vinyl ensuring that the vinyl does not twist or develop trapped air bubbles.

Drying time will vary according to temperature, substrate porosity and other environmental variables.

**Note:** always pretest the bond strength prior to proceeding with a full scale installation of the tile.

**Note:** Ensure that severe curling, lifting edges and/or lifting corners are addressed during bonding.

**Note:** Titanium Sheet Vinyl should be rolled utilizing a 100 pound vinyl flooring roller as soon as it is determined that shifting of material or bleeding of the adhesive will not take place (after approximately 20 minutes). DO NOT ALLOW THE ADHESIVE TO OVER DRY. Roll again 1 hour after installation. Re-roll as needed.

**NOTE:** The adhesive's bond strength develops and increases over a period of several days to two weeks. Water and any subsequent cleaning products should not be introduced to the floor until the adhesive has achieved full cure. 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 of adhesive residue:** Warm soapy water normally removes the KE 2000 SL prior to it curing.

**13) Heat weld seams:** Allow the flooring and adhesive to cure for at least 24 hours prior to heat welding. Heat weld all seams to industry accepted standards using United SCP Heat weld rod. **Note:** The heat weld shall be an integral part of the flooring (not simply a filler for the groove).

**14) Traffic and Maintenance:** Traffic shall not be allowed on the newly installed floor for at least 24 hours after finalizing install.

**Initial Move In:** Protect your esd flooring investment during the initial loading phase. Cover the newly installed esd flooring with Masonite, thick cardboard or Ram board sheets prior to rolling over the new substrate with heavily loaded forklifts, man lifts etc. Remove nuts, bolts, rocks, nails etc. from the wheels of heavy equipment prior to rolling over the protective coverings.

**Adhesive residue:** Careful installation will avoid the transfer of conductive adhesive to the top of the flooring. Should your installation have adhesive on the top surface of the flooring this may be removed with a soft white cloth or sponge dipped in a mixture of hot water and ElectraClean diluted to a ratio of 8 ounces of [ElectraClean](#) to a gallon of water. The KE 2000 SL adhesive removes easily prior to drying but is much harder to remove if left unattended and allowed to cure overnight. Insure that the area is dry once the clean-up is completed. Dry dust mop new flooring and damp mop as needed with warm clean water and ElectraClean.

**Initial Maintenance and Ongoing Maintenance:** [Initial maintenance](#) should not be performed for a minimum of 72 hours after the installation is complete to allow the adhesive to fully cure.

**Ongoing Maintenance:** Refer to United SCP's [Titanium Maintenance Instructions](#) for further details.

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## NOTICE:

1. United recommends always performing moisture testing, bond testing, and alkali testing and documenting the results before installing this resilient flooring over concrete.
2. Do not install Titanium Sheet Vinyl over existing resilient flooring using Uzin KE 2000 SL Adhesive. Should this be a requirement consider using [Titanium Sheet Vinyl and our peel and stick adhesive process](#).
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 / m<sup>3</sup>). 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.

5. The manufacturers / suppliers Titanium Sheet Vinyl and their associated adhesives are the sellers of materials only. The information and statements contained in these installation instructions are believed to be correct and to represent current state of the art. However, since the seller has no control over method of application, conditions during application, dryness of building, presence of water barriers, environment where used, or surfaces to which the products are applied, there is no express or implied warranty for completed installations. It is solely the responsibility of the purchaser/installer to determine that the materials are fit for their particular purpose. Prerequisite for sale of our products is that the buyer purchases at their own risk and conducts installation tests prior to making a large installation, with no liability to us. In no event is seller responsible if materials with visible defects are installed.

**Tech support** is available 24/7 for our installers and customers by dialing 719 676 3928 and selecting option 8.

Revision History  
10/09/2013: Initial Release  
8/7/18: Added Uzin Adhesive  
11/14/2019: Secured hyperlinks  
2/10/2021: Lie flat and straight prior to adhesion, alternate trowel sizes.

Approved: SRC

End of Document