

Installation Guide for 7900 Series Conductive Vinyl Tile



Job Site Conditions and Product Conditioning

- The building's permanent HVAC system must be on and maintained consistently at a range of 65° to 85° F (20° to 29°C) for at least 5 days prior to installation and permanently thereafter.
- Flooring materials and adhesive must be maintained within at a range of 65° to 85° F (20° to 29°C) for a minimum of 48 hours before and after the installation.
- Remove plastic stretch wrap after delivery to the job location. Do not stack pallets. Remove product from cartons and stack on a smooth dry surface no more than 20" high.
- Inspect all material for damage or defects prior to installation. Statguard Flooring will not be responsible for any cost associated with replacement or repair as a result of damaged or defective tiles being installed which were identifiable prior to installation. If you encounter any condition or defects during installation which could jeopardize the installation or affect the installation procedure you should stop the installation immediately and contact Statguard Flooring.

Substrate Condition and Preparation

- All substrates must be smooth, permanently dry, flat and structurally sound.
- The substrate must be clean, free of contaminants like paint, oil, or wax, curing compounds, sealers or any other foreign material which may interfere with proper adhesion. The subfloor shall be free of defects like cracks, holes, and projections; patch any defects or irregularities with latex-fortified cementitious underlayment material. The subfloor must also be level to avoid misalignment of rows of tile during installation. If needed, level the floor with latex-fortified cementitious underlayment material. Remove any mastic or adhesive left from previous flooring or cover it with at least 1/8 inch of cementitious underlayment material. Do not use gypsum or plaster based floor levelers or patching compounds.
- If removing an existing floor, you must remove 100% of old adhesives, paints or other contaminants. Follow the Resilient Floor Covering Institute's (RFCI) Recommended Work Practice for Removal of Existing Floor Covering and Adhesive, and all applicable industry, local, state and federal standards.
- Do not use adhesive removers or solvents as residues can attack and break down the new adhesive and cause tile to release. Floor covering warranties do not cover instances where adhesive removers or solvents cause damage to the flooring or installation failure.

- Concrete floor slab on-grade or below grade must have a permanent, effective moisture vapor retarder installed below the slab.

Respirable Crystalline Silica and Asbestos Warning

Concrete substrate surfaces, underlayment material, and/or existing resilient flooring, backing, lining felt, paint, asphaltic cutback adhesives, or other adhesives may contain respirable asbestos fibers or respirable crystalline silica if disturbed.

Consult with OSHA §1926.1153 for latest federal regulatory requirements before sanding, grinding, scarifying, dry sweeping, dry scraping, drilling, sawing, bead-blasting, or mechanically chipping or pulverizing, or otherwise damaging any of these materials. Avoid creating dust when working with, repairing, preparing, or removing such materials. Use of dust collection equipment and appropriate personal protective equipment such as an approved respirator may be required to control worker exposure to respirable crystalline silica. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm.

Unless positively certain that the product is a non-asbestos-containing material, presume that it contains asbestos. Regulations may require that the material be tested to determine asbestos content. The Resilient Floor Covering Institute's (RFCI) Recommended Work Practices for Removal of Resilient Floor Coverings should be consulted for a defined set of instructions addressed to the task of removing all resilient floor covering structures.

Concrete Substrates

- New and existing concrete subfloors should meet the guidelines of the latest edition of ACI 302 and ASTM F 710, "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring", available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428, www.astm.org. 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 lightweight, should have a compressive strength of 3,500 psi (24 MPa) or greater. *ACI 302.1R-96, Guide for Concrete Floor and Slab Construction, pp 5 and 22. (Concrete subfloors must have a minimum compressive strength of 3,000 PSI.)
- Moisture testing must be performed on new and existing concrete on, above or below grade, prior to installation.



Installation Guide for 7900 Series Conductive Vinyl Tile

- Perform moisture testing per ASTM F 1869, Standard Test Method for measuring Moisture Vapor Emission Rate (MVER Testing) of Concrete Subfloor Using Anhydrous Calcium Chloride or ASTM F2170 Standard Test Method for Determining Relative Humidity (RH Testing) in Concrete Floor Slabs using in Situ Probes.
 - ASTM F 2170: Three tests should be conducted for areas up to 1,000 sf. One additional test should be conducted for each additional 1,000 sf. Readings of moisture levels when measured by this method should not exceed 75%.
 - ASTM 1869: Three tests should be conducted for areas up to 1,000 sf. One additional test should be conducted for each additional 1,000 sf. Moisture levels when measured by this method should not exceed five (5) pounds per twenty-four (24) hour period per one thousand (1,000) square feet.
 - Observe and document compliance with all ASTM test method requirements concerning building conditions and test equipment when administering these tests.
 - If moisture levels are found in excess of these levels the general contractor or business owner must be advised and a decision made if the installation is to begin. Statguard Flooring will not be responsible of any moisture related installation failures if these guidelines are not strictly followed.
 - Note that either of these tests indicates moisture conditions only for the time and the conditions under which they are taken. **DO NOT INSTALL TILES IF EITHER LIMIT IS EXCEEDED OR IF THERE ARE OTHER CONDITIONS THAT WOULD SUGGEST RISK OF HYDROSTATIC PRESSURE OR HIGH ALKALINITY.**
 - Joints such as expansion joints, contraction joints, isolation joints, saw cuts, control joints, grooves or other moving joints shall not be filled with patching compound, sealant or covered with resilient flooring. Use a properly designed joint cover.
 - Any non-moving surface cracks, depressions and other irregularities shall be filled and smoothed with a high quality grade Portland cement-based water resistant, non-shrinking, non-staining mildew resistant, alkali resistant underlayment having a minimum compressive strength of 3,500 psi after 28 days.

Conductive Adhesive

Use the Conductive Flooring Adhesive for most installations of standard CVT. For problematic installations and for areas with high point loads consult with Statguard Flooring for alternative adhesives. Failure to use recommended adhesives will result in loss of warranty.

Adhesive Bond Test

Install 2 tiles x 2 tiles in several locations, 50 feet apart, throughout the installation area following the installation procedures below. Allow these tiles to set for 48 hours. A significant amount of force should be required to remove the tiles. If tiles are easily removed this could indicate that a foreign material, such as a concrete sealer, is present on the substrate. Additional information regarding these tests can be obtained from Statguard Flooring.

Tile Installation and Grounding

- Properly prepare and document subfloor conditions prior to the commencement of the installation.
- To control the proper application of the adhesive, size each section to match the recommended spread rate; for example, the typical spread rate for [8453](#) Conductive Floor Tile Adhesive has an average spread rate of 200 square feet per gallon unit, so a section 10' x 20' would be appropriate. Commonly used layout patterns are straight line (Figure 1) or pyramid (Figure 2).

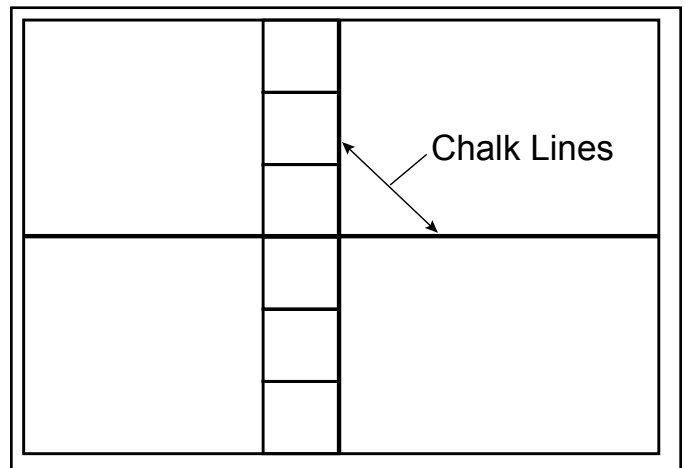


Figure 1. Locating and marking the center of the room.

Note: ESD Vinyl Floor Tiles require special Installation using Conductive Adhesive and Copper Foil Grounding Strips.

- Commencement of the installation indicates acceptance and full responsibility for the completed work.



Installation Guide for 7900 Series Conductive Vinyl Tile

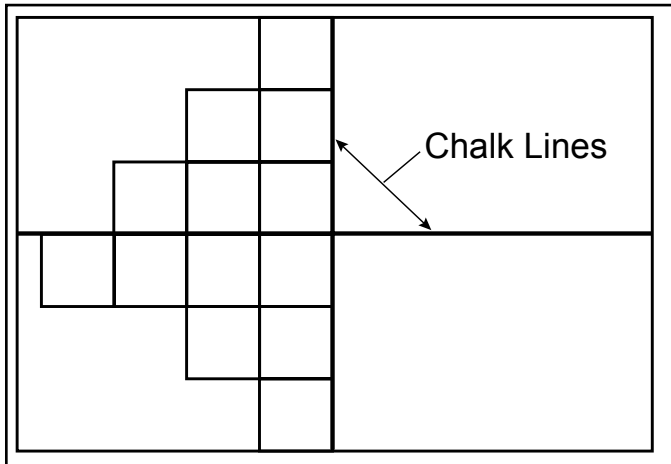


Figure 2. Measuring the proper spread rate for [8453](#) Conductive Floor Tile Adhesive.

- Roll the flooring surface across the width and length with the manufacturer’s recommended roller to break down adhesive ridges and to ensure complete removal of trapped air.
- Multiple rolling may be required to maintain proper flooring placement during cure.
- Clean off excessive adhesive with water while it is still wet. Use mineral spirits to remove dry adhesive.
- Prevent all traffic on the floor for a minimum of 24 hours after installation. Restrict heavy traffic for a minimum of 72 hours after completion.
- Do not clean the floor for a minimum of 5 days after installation.

NOTE:

Ambient conditions (temperature, humidity), subfloor surface condition and absorption rate (porosity), and applicator technique can all affect the proper application and function of the adhesive. The most important requirement is to achieve adequate adhesive transfer to the back of each tile after it has been laid into the adhesive and rolled, as per instructions on this sheet. *Throughout the installation, periodically lift an embedded tile and inspect the backside to ensure that at least 80-90% has been covered with the adhesive.* This level of coverage will result in the proper adhesive bond and proper electrical conductivity. If the coverage is less than 80-90%, adjust the installation procedure accordingly. Inadequate coverage on the back of the tile indicates that either: If there is not enough adhesive being applied to the substrate (due to incorrect trowel size or improper troweling technique), the adhesive had begun to set up before the tile was laid, or the newly laid tile was not rolled properly or soon enough. The correct trowel size is important. If the notches are smaller, too little adhesive will be spread, resulting in bond strength and conductivity below specification. If the notches are too large, excessive adhesive will be spread and may seep up between the seams, especially during rolling. Excessive adhesive can also cause the tiles to shift or “float.” Throughout the installation, routinely check for any changes in the notch size due to wear; replace or re-notch worn trowels.

Installation Over Other Surfaces Moisture Mitigation Systems

- Test the floor to determine porosity following the procedure set forth on the label instructions.
- Perform a bond test as described on the label instructions.

- Check each tile for visual defect during installation.
- After properly preparing the application surface sweep/vacuum/mop the area thoroughly. Any pieces of debris that remain can “telegraph” through the newly installed tile and be seen as bumps in the finished surface.
- Mix the adhesive thoroughly, following instructions on the container. Spread adhesive over the first marked section, using the designated trowel size. (For [8453](#) Conductive Floor Tile Adhesive, the proper notch size is 1/16" square notches on 1/16" centers.) (Figure 3) Allow the applied adhesive to sit for about 20 minutes before laying tile to allow any residual solvent to “flash off.” Spread the adhesive directly over any copper ground strips. Working time for the mixed adhesive is roughly one hour, but this time can vary with ambient conditions.

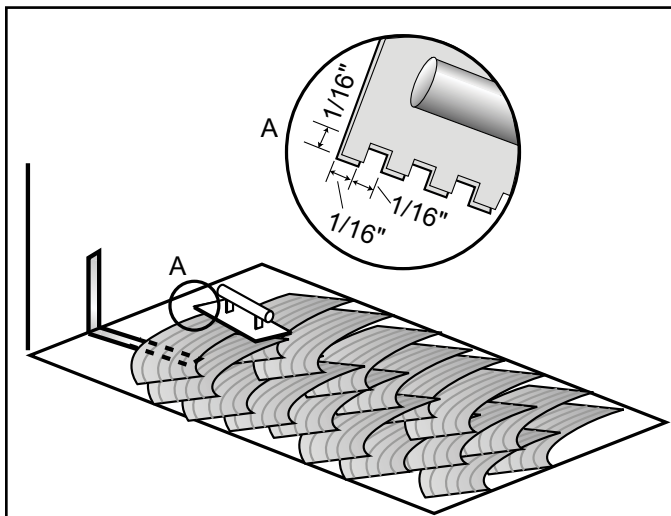


Figure 3. Spreading [8453](#) Conductive Floor Tile Adhesive.



Installation Guide for 7900 Series Conductive Vinyl Tile

- The subfloor must meet all other conditions described for installation over cement substrates.
- Use the specified trowel size based on whether the floor is porous or non-porous. Depending on the porosity allow for proper adhesive open times as described on the label.
- Use APA approved exterior grade plywood if finished floors are subjected to moisture.
- Other wood products are not recommended as manufacturers may use adhesives or other additives that could cause staining or discoloration of the flooring.
- Installation on a sleeper system over concrete is not recommended.
- Follow the recommendations of the APA, The Engineered Wood Association, Design/Construction Guide, Residential and Commercial, and ASTM 1482, Standard Guide to Wood Underlayment Products. Available for Use under Resilient Flooring, for the installation and proper construction of the panels to receive resilient flooring.

VCT, ESD Tile, Vinyl Sheet

- Tile may be installed over existing VCT, vinyl tile or vinyl sheet only on above grade areas.
- May be installed over only a single layer of properly installed vinyl sheet.
- Inspect and ensure there is an adequate bond of the old flooring to the original substrate. Repair as necessary.
- Statguard Flooring will not warrant the product if there is a bond failure caused by problems relating to the old flooring.
- The subfloor must be structurally sound and meet all requirements and conditions for concrete substrates.
- Remove any old finishes.
- Perform a bond test as described on the label instructions.
- Apply adhesive following instructions for non-porous surfaces.
- Note that embossing on the surface of the subfloor may telegraph and interfere with proper bonding.

Rubber

Do not install over rubber.

Wood Floors

- Wood subfloors shall be of double layer construction with a minimum thickness of 1".
- Crawl spaces underneath wood subfloors shall be in compliance with local building code ventilation practice and have a clearance of at least 18" of cross-ventilated space between the ground level and joists. Wood joists should be spaced on not more than 16" centers.
- Place a moisture retarder having a maximum rating of 1.0 perm on the top of the wood subfloor overlapped at least 8". APA, The Engineered Wood Association, Underlayment Grade plywood, minimum 3/8" thick, with a fully sanded face is to be used.

Terrazzo and Ceramic Floors

- Follow preparation and testing procedures for cement subfloors.
- Inspect and ensure there is an adequate bond of the old flooring to the original substrate. Repair as necessary.
- Statguard Flooring will not warrant the product if there is a bond failure caused by problems relating to the old flooring.
- Ensure all glazed, sealed, smooth and/or shiny surfaces are properly sanded and cleaned.
- Fill grout lines with Portland cement based underlayment with a minimum compressive strength of 3,500 PSI.
- Apply adhesive following instructions for non-porous surfaces.

Metal Surfaces

- Clean metal floors with isopropyl alcohol to ensure no residues are present.
- The surface should be abraded using a low speed buffing machine equipped with a black pad.
- When installing over access panels, the area under the panel shall be well ventilated.
- The metal surface must be treated as non-porous.
- The adhesive must be allowed to dry to touch prior to installation of flooring. Follow instructions on the label for installation over non-porous surfaces.



Installation Guide for 7900 Series Conductive Vinyl Tile

Grounding

To ground the floor use [81524](#) copper foil strips supplied by Statguard Flooring. Ground strips should be installed over the adhesive and under the tiles. Identify the proper locations for the strips, typically along the base of walls or at columns where there is access to a grounding point (e.g., electrical outlet). Install one (1) ground strip for each 1,000 square feet of floor area. Apply each strip using the adhesive side to stick about two-thirds of the strip to the floor surface and the remaining one-third vertically up the wall or column. An electrician should mechanically connect the copper foil to a ground point. (See Figure 4.)

Clean-up

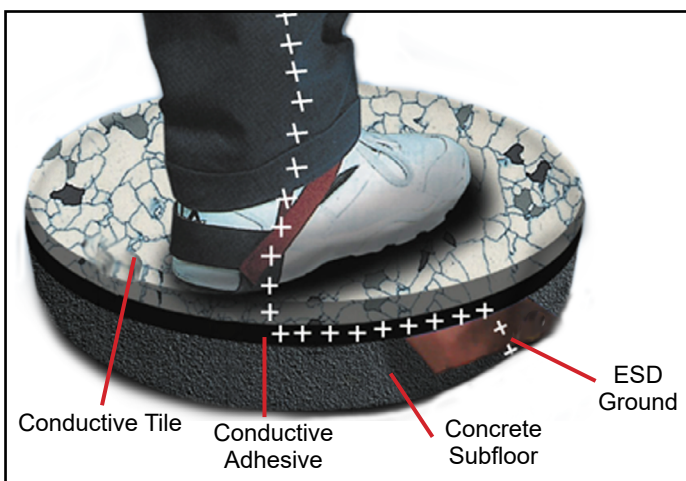
Avoid using excessive amounts of adhesive. Adhesive can be removed with soap water while it is still wet. Use mineral spirits to remove adhesive after it has dried. **DO NOT APPLY SOLVENT DIRECTLY TO FLOORING MATERIAL.**

Immediately Following Installation

- Prevent all traffic for a minimum of 24 hours after completion of installation. Prevent heavy traffic for a minimum of 72 hours.
- Do not clean the floor for a minimum of 5 days after installation.

Grounding Glue Down ESD Flooring

Different options for grounding ESD flooring are illustrated below. For all options, a copper strip is placed into the wet adhesive. A second coat of esd conductive adhesive is typically applied over the strap prior to installing the floor tile on top.



Make sure to roll vinyl securely in place over strip using 100# flooring roller.

In Figure 4. A copper strip 1 to 3 feet long is placed in conductive adhesive, prior to covering with esd flooring. Then the copper strip is used as a “pig tail” going up the wall and terminated at the electrical outlet, grounding bus or multi point.

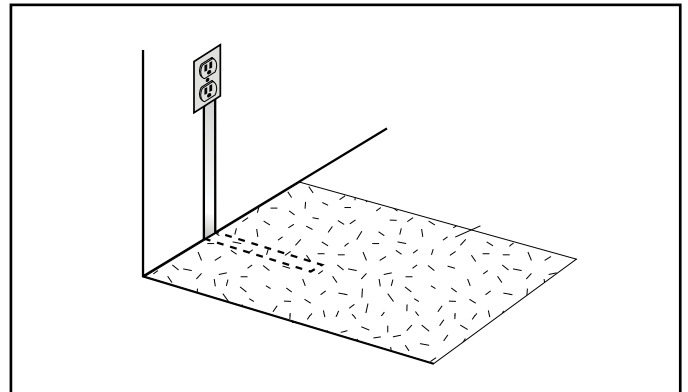


Figure 4. Properly grounding a copper ground strip.

Limited Warranty, Warranty Exclusions, Limit of Liability and RMA Request Instructions

See the Statguard Flooring Warranty - StatguardFlooring.com/Limited-Warranty.aspx