



StaticSmart Summit Series ESD Vinyl Tile

with LG 5100 Solvent Free ESD Flooring Adhesive

Installation Guide

Note: The following instructions should be reviewed prior to installation. Every effort has been made to provide accurate and reliable information in this guideline. This is only intended as a guide for our customer's use with our recommended tools and materials. Julie Industries can not 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. End user customers are advised to conduct their own tests for a particular application. We strongly recommend using a licensed and experienced flooring installer to ensure satisfactory results.

SELECTION OF FLOORING:

Several factors must be considered when specifying resilient flooring. A proper evaluation of site conditions, level of commercial traffic, and other external factors should be considered. Design and pattern, product durability, substrates and site conditions are all basic parts in the specification process to consider.

IMPORTANT! StaticSmart ESD Vinyl Tile should not be used in exterior applications, golf shops, locker rooms, food processing facilities, or commercial kitchens.

Basic Requirements: Flooring must be installed at the final stage in any type of construction. Avoid rolling load traffic for at least 72 hours. If rolling loads cannot be avoided, protect the new flooring with wood panels.

Allow enough time for adhesive to cure. Keep foot traffic off of the floor for at least 24 hours. Take precautions to properly protect the newly installed flooring if remaining work by other trades is to be completed.

Heavy construction paper covered by plywood sheets is the best method for protecting newly installed resilient flooring.

Measuring: Installation inspection such as quantity, color, design, etc. must be checked and confirmed prior to installation. Be sure to use identical LOT numbers if required. LOT shows lot number and lot type. Lot numbers describe the date of production. Lot type describes lot type by alphabetic code. Identical lot codes mean identical lot numbers and lot type.

Trowel Size Requirement: 1/16" x 1/16" x 1/16" U or Square notched.

Job Site Conditions:

1. The building's permanent HVAC system must be on and maintained consistently at a range of 65° - 85° F, (20° - 29° C) for at least 5 days prior to installation and permanently thereafter.
2. All flooring materials and adhesives should be acclimated to the job-site conditions for a minimum of 48 hours prior to beginning the installation. Store cartons flat and squarely on top of one another, not on edge.
3. Visually inspect all material before installation. Contact Julie Industries Customer Service immediately if any problems exist. ***Any material installed with visual defects may not qualify as a valid claim.***

Moisture Testing: Substrates to receive flooring must be free of moisture. Moisture testing should be performed by ASTM F 1869 Calcium Chloride Tests with moisture levels not to exceed three (3) pounds per Twenty-Four (24) hours per one thousand (1000) square feet

or ASTM F 2170 In Situ Relative Humidity Test with readings with moisture levels when measured by this method, not to exceed seventy-five (75) percent. If excessive moisture is present, the general contractor or building owner must be advised and a decision made if the installation is to begin. Julie Industries will not be responsible for any moisture related installation failures if these guidelines are not strictly followed.

Adhesives: LG 5100 Solvent Free ESD Flooring Adhesive

LG 5100 Solvent Free ESD Flooring Adhesive is designed for the installation of StaticSmart Summit Series ESD Vinyl Tile. LG 5100 is a non-flammable water-based adhesive that is resistant to plasticizer migration and can be applied using common tools and techniques over a variety of subfloor surfaces. This adhesive has low odor and "zero" calculated VOC's (based on no solvents used), which makes it ideal for use anywhere odor is a concern, and also conforms to California requirements as specified in SCAQMD Rule 1168.

NOTE: These instructions are for ***LG 5100 one part ESD adhesive only***, if using LG 5500 or another type / brand of adhesive, please consult that specific adhesive instructions for proper handling and installation procedures.

Since applications vary depending on adhesive used, please refer to adhesive label for more detailed information regarding spread rates and drying times, or contact your StaticSmart Flooring Representative.

SUBSTRATES: Conditions and Preparation

Substrate conditions affect a great deal to the overall appearance of StaticSmart Vinyl Tile. Proper adhesion requires that the surface be clean, dry, and free from dust, paint, old floor finishes, existing adhesives, or any other foreign material. Do not use this adhesive on any substrate that has been chemically cleaned. Adhesive coverage and spread rate may vary according to the substrate type and application method.

CONCRETE SUBSTRATES

Basic Conditions:

1. Any defects found from concrete substrates must be corrected. Newly installed concrete substrates contain excessive moisture residues. Ideal time for the moisture residue to dry completely is 28 days / inch (1day / millimeter). Usually the thickness of the concrete slab is set to 20 (50cm). Moisture dissipation time can depend upon thickness of the slab and other external conditions.
2. Substrates must be smooth and dry enough to receive resilient flooring.



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Notice:

1. StaticSmart recommends always performing moisture testing, bond testing, and alkali testing and documenting the results before installing resilient flooring over concrete.
2. Do not install StaticSmart flooring over existing resilient flooring that is too heavily embossed, not adhered well to substrate, is dirty with excessive wax build-up, etc. StaticSmart recommends removing existing resilient flooring whenever possible. StaticSmart does not recommend removing flooring and adhesives containing asbestos by sanding, etc. Removing flooring and adhesives containing asbestos should be done by a qualified asbestos abatement company.
3. Using chemical compounds or waterproofing treatments on concrete substrates where Alkalinity / hydrostatic pressure is 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.

Moisture: Moisture testing must be performed for both new and existing concrete before installation. To perform this test, refer to ASTM 1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor or ASTM F 2170 In Situ Relative Humidity Test Using Anhydrous Calcium Chloride.

New and existing concrete substrates: New and existing concrete subfloors should 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 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.

NOTE: Regardless, in the event of underlayment failure, the responsibilities for warranties and / or performance guarantees is the responsibility of the subfloor subcontractor, not with the manufacturer of the resilient flooring.

Aged Concrete Substrates: Concrete substrates must be free of moisture before the installation of resilient flooring. Aged concrete substrates must be free of paint, grease, wax and other foreign materials and it should be leveled. Perform underlayment reinforcement to cure the damaged or indented area.

Painted Concrete: Concrete substrates must be free of paint, grease, wax and other foreign material before installing underpayments or tile

ASTM test categories that judges condition of substrates are as follows:

ASTM D 4258 Cleaning test of coating concrete surface

ASTM D 4259 Abrasion test of concrete surface

ASTM D 4260 Alkalinity test of concrete surface

ASTM D 4261 Extension feasibility test of concrete surface

ASTM D 4262 Erosion PH test of concrete surface

Follow all ASTM guidelines for proper preparation.

Existing Resilient Flooring: Installing StaticSmart 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 pneumonic. 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.

WARNING: DO NOT SAND, DRY SCRAPE, DRY SWEEP, SAW, DRILL, BEADBLAST, OR MECHANICALLY CHIP OR PULVERIZE IN ANY WAY EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC CUTBACK ADHESIVES OR ANY OTHER ADHESIVES. THEY MAY CONTAIN ASBESTOS.

Curing and Parting Compounds: Curing and parting compounds on concrete substrates where resilient flooring will be installed may damage adhesion resulting in installation failure.

“Curing compounds leave a film that can interfere with the adhesion of other materials to the treated surface; Their use should be avoided on surfaces that will later be covered with resilient floor coverings, Where applicable, a letter of compatibility should be issued prior to the use of a curing compound on a floor receiving a subsequent finish.” - American Concrete Institute, ACI, publication 302.1R-96, Guide for Concrete Floor and Slab Construction.

Letter of compatibility must come from the manufacturer of the compound.



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Gypsum Based Underlayments: Gypsum base underlayments and substrate leveling compounds are utilized for noise and fire proof purposes. Responsibility of underlayment compound use is attributed to underlayment manufacturer.

Floor Fills / Toppings: Resin-reinforced self-leveling cement underlayments, cellular concretes, and gypsum based products 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.

WARNING: Latex patching reinforcement will not prevent moisture permeation through concrete slabs.

Latex Patching Procedures: Follow directions given by the latex underlayment manufacture. Refer to the following guidelines:

1. Materials that might hinder the adhesive curing such as concrete residues, gypsum residues, powder, oil, grease, dust, paint and other foreign materials must be removed in advance.
2. Creased concrete and concrete debris must be leveled through grinding process.
3. Use of emulsification during surface leveling work may decrease strength of adhesives. Consult with relevant manufacturer in advance.
4. Use soap solution and clean water to remove dirt. Flooring must be clean and free of moisture.
5. All holes and indented areas must be mended before underlayment operation begins.
6. When underlayment operation is conducted, consult and use only the recommended products from latex substrates manufacturer.
7. Permeability of underlayments will not be efficient with concrete, ceramic, and terrazzo. For more information, refer to the underlayment manufacturer's technical guide.
8. Do not conduct latex patching underlayment below 50° F (10 C). Do not expose to sun directly.
9. Neutralize acid or alkali compounds on the subfloor before conducting the installation.

Radiant Heated Floors: Radiant heated floors must be secure and underground beneath the concrete subfloor. Resilient flooring must be stored and installed at temperature that does not exceed 85° F (29.4 C). If the existing floor is a radiant heated floor, a moisture preventive panel between the underground radiant heating device and the substrate must be pre installed to block moisture evaporation. Keep the radiant heated floor free from traffic for at least 48 hours and keep the same temperature before and after the installation. Temperature from the radiant heat may increased gradually.

CAUTION: If resilient flooring is installed on concrete slab with hot water pipe(s) under-ground and operated by the building's central

heating system, this may cause discoloration of the resilient flooring. The responsibility of this matter is borne by the end user.

CAUTION: Keep radiant flooring temperature below 85° F (29.4 C) at all times.

Extension Joints: Extension joints are inserted for the purpose of concrete crack prevention when subfloor slab is moving. Insertion of expansion joints right beneath StaticSmart resilient flooring may cause installation to fail.

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 floors (sleepers).
- Over fireproof plywood.
- To crooked Floors or vibration sensed floorings.

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

Other Information: Old terrazzo, sealer, wax, oil and dirt must be cleaned and removed thoroughly. Heavily worn out areas must be reinforced. Consult with the underlayment manufacturer for surface treatment.

Over Existing Resilient Flooring: Do not install over plank tile on concrete gypsum or cushion vinyl products and DIY Tile. Remove chemical compounds, wax, oil, dirt completely and moisture test must be taken as well.

INSTALLATION:

Follow all recommendations and guidelines for proper flooring installation.

Over porous substrates, install the flooring into the adhesive just as it reaches a semi-dry state, about 10 minutes after spreading. Drying speed will vary according to temperature and porosity of the substrate, temperature of the air and components, relative humidity, as well as dryness of the floor and thickness of the application. When installing over a non-porous substrate, allow the spread adhesive to dry until the surface becomes tacky to the touch (around 15 - 20 min) with little adhesive transfer to the fingertip.

Flooring should be installed immediately after the required open time; otherwise important bonding properties will be affected.



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Roll the installed tile with a 3-section, 100 lb. roller approximately 10-15 minutes after placement. Roll the floor again after 1 hour if edges are lifting. DO NOT walk over newly installed tiles. If necessary, use a long painters pole in the roller handle to reach further.

Trowel for porous subfloors: 1/16" x 1/16" x 1/16" U or Square notched, 150 – 160 square feet per gallon

Trowel for non-porous subfloors: 1/32 x 1/16 x 1/32 U or Square notched, 160 – 180 square feet per gallon

Note: ESD flooring must be grounded in each segregated area, or once every 1,000 square feet of area. For proper grounding, place ground strips into the wet adhesive and apply additional adhesive over it prior to laying flooring. Once in place, connect all ground strips to the proper ground terminal.

Clean up: Clean up of tools and equipment may be accomplished using soap and water if the adhesive is in the wet state.

Dried adhesive: Detergent cleaner containing phosphate should be a good choice for removing carbon. Phosphates are not as common in laundry detergents any more, but might be found in concrete and deck cleaners. Also a surfactant type cleaner that contains glycol ether, such as 409 Cleaner. Apply the cleaner to the spot and let it set for several minutes, then scrub with a clean cloth.

CAUTION: Do not get liquid cleaner between tiles, it will bring up more black adhesive causing a bigger issue. Apply the cleaner to a cloth and wipe the stained area

Storage and Handling: Containers should be kept tightly closed. Protect from freezing (32 deg. F.).

GROUNDING OF STATICSMART VINYL FLOORING

StaticSmart ESD Vinyl Tiles are primarily used for eliminating static electricity and should therefore be grounded so that any absorbed electricity can be discharged to outside. The method of grounding can be selected depending on the site conditions and preference of user. Copper grounding strip should be laid over the adhesive and underneath the tile.

A. Building Ground

Connect copper foil grounding strap to the structural building steel every 1,000 s.f.

B. Electrical Ground

Connect copper foil grounding strap to the electrical ground every 1,000 s.f.

MAINTENANCE

Do not begin wet maintenance for at least 4-5 days after installation is complete. NEVER "flood" the floor when performing maintenance. Julie Industries maintenance instructions may be obtained by contacting customer service at 978-276-0820 or at www.julieind.com

QUESTIONS/ASSISTANCE

For questions or assistance, please contact Julie Industries Customer Service at 978-276-0820, Monday-Friday between 8:30 am and 4:00 pm EST.

Disclaimer: The information and statements herein are believed to be reliable, but are not to be construed as a warranty or representation for which the manufacturer assumes legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or product referred to herein. No warranty of fitness for a particular purpose is made. This Technical Data sheet and the information conveyed herein supersede all previous versions.