

Installation Guidelines

StaticSmart™ ESD Vinyl Tile

StaticSmart strongly recommends using an experienced professional installer to install your ESD Vinyl floor. This will ensure proper site preparation, material installation and lasting performance of your ESD vinyl flooring.

1. 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.

2. Basic Requirements: Flooring must be installed at the final stage in any type of construction. 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.

3. 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.

4. Room Temperature: Flooring materials and room temperature must be maintained within 60° F / 75° F (18 C and 25 C) for at least 24 hours before and after the installation.

5. Moisture Testing: Substrates to receive flooring must be free of moisture. For normal concrete substrates, Anhydrous Calcium Chloride Test results must not exceed 3lb / 1000sq ft / 24hours as stated in resilient flooring installation guide on concrete substrates.

6. Adhesives: 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. Substrates to receive installation must be clean, completely dry and free of damage.

1. CONCRETE SUBSTRATES

A.) 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.

B.) Notice:

1. StaticSmart recommends always performing a calcium chloride test, bond test, and alkali test 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.

C.) Moisture: Moisture test 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 Using Anhydrous Calcium Chloride.

D.) 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.

E.) 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.

F.) 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:

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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.

G.) 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.

H.) 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.

I.) 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.

J.) 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 resil-

ient 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.

K.) 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.

L.) 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 48hours 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.

M.) 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.

2. WOOD SUBSTRATES

A.) General Information: Wood substrates must be constructed with

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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.

B.) 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.

C.) 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.

D.) 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.

E.) 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.

3. 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.

4. QUESTIONS/ASSISTANCE

For questions or assistance, please contact Julie Industries Customer Service at 978-988-8802, Monday-Friday between 8:30 am and 4:00 pm EST.

StaticSmart strongly recommends using an experienced professional installer to install your ESD Vinyl floor. This will ensure proper site preparation, material installation and lasting performance of your ESD vinyl flooring.

StaticSmart ESD Vinyl Tile

- Suitable for all types of electronic manufacturing and assembly
- Chemical resistant
- Clean room compatible
- Less than 50 volts static generation per AATCC-134
- Available in conductive or static dissipative
- Permanent static protective properties
- Meets ANSI/ESD 20-20
- Electrical Resistance: Greater than 2.5×10^4 and less than 1.0×10^8
- Can be installed using our patented conductive release adhesive or our conductive acrylic and epoxy adhesives