

# Statguard® ESD Dissipative Modular Carpet Installation Instructions



**NOTE: Statguard® ESD Modular Carpet requires Special Installation using Full Spread Conductive Releasable Adhesive and Braided Ground Straps.**

## Floor Preparation

### INSTALLATION INSTRUCTIONS

**NOTICE TO INSTALLER: LIMITED WARRANTY IS EFFECTIVE ONLY IF THESE INSTALLATION INSTRUCTIONS ARE FOLLOWED IN EVERY RESPECT. MAKE CERTAIN THESE INSTRUCTIONS ARE PLACED IN THE HANDS OF THE FLOOR OWNER.**

**CRI / Carpet Rug Institute 104.** In addition to the specific instructions detailed here, the Carpet and Rug Institute Standard for Installation of Commercial Carpet, CRI 1-04, must be closely followed as basic minimum requirement for floor preparation and installation on all carpet installations. Please note that many of the Statguard® Modular Carpet installation requirements, detailed here may actually exceed those in the CRI Installation Standard because of specific product characteristics.

Attention to detail during floor preparation and installation is essential to take full advantage of Statguard's performance potential.

#### Testing concrete.

The general contractor or installer should perform tests for moisture and alkalinity before installation. Test for moisture or vapor emission with a calcium chloride kit. We recommend the use of Statguard® Floorings Moisture Detection Test Kit item # [81305](#). This kit meets ASTM F1869-98. Call Statguard® Floorings @ (781) 821-5609.

\* Excessive moisture or alkalinity can contaminate the Conductive Adhesive # [81303](#), or damage the carpet backing, adversely affecting indoor air quality.

Installing Statguard® ESD Modular Carpets over excessive moisture can also void product warranties.

Moisture vapor emission should not exceed three pounds per 1,000 square ft. per 24 hours as determined by the proper application of the calcium chloride test. Keep in mind that test protocol now requires that the test environment be similar to the environmental conditions anticipated when the space is occupied. That generally means the building must be enclosed and climate controlled for at least 72 hours prior to testing. Also the test must also be in place a full 72 hours to develop accurate readings. It is recommended to conduct a test for every 1,000 square feet.

**Concrete moisture.** Moisture emission rate should be determined with proper application of the calcium chloride test. Vapor emission levels should not exceed three pounds as determined by the proper application of the calcium chloride test. If the concrete slab moisture test is higher than three pounds, STOP the installation immediately.

**Alkalinity.** Alkalinity should be determined with pH testing strips and distilled water. Test for alkalinity by scraping an indentation in the concrete and pour a small amount of distilled water into the indentation. Use pH test papers or test strips to check the pH of the water. If the chemical pH is over nine on a scale of 14, wash floor with a mixture of 30% vinegar and 70% water. Rinse floor with water and retest. Repeat, if necessary, until pH is seven or over, but less than or equal to nine. If the chemical pH is over nine, STOP the installation immediately. Detailed procedures for conducting these tests are included in the test kit.

Technical support is available at Statguard® Flooring at (781) 821-5609.

#### Primers:

To assure maximum performance, floor primers and Conductive Adhesive # [81303](#) have been specially formulated for this specific backing type. Use of any other primer or Conductive Adhesive # [81303](#) can cause a breakdown in the composition of the backing material and will void the product warranty. Unless specifically addressed in these instructions, Statguard® ESD Modular Carpet should only be installed with the following products by ReSource Technologies and Statguard® Flooring:

- ReSource 3300, primer barrier coating
- Statguard # [81303](#), pressure sensitive Conductive Adhesive

ReSource 3300 barrier coating is recommended as an excellent way to assure a proper, long-term Conductive Adhesive # [81303](#) bond for any carpet installation. ReSource 3300 barrier coating is recommended to be used on:

- New concrete slabs
- Leveling or patching compounds
- Existing adhesives

#### Preparing the Sub-Floor

Any sub-floor onto which carpet is to be installed should be carefully inspected to assure that proper bonding of the carpet to the floor could be achieved. Proper adhesion requires that the sub-floor surface be clean, dry, level, free from dust, oil, paint, greases, sealer, paint, old adhesives and floor finishes, or any other foreign material.

The level should meet the same standards as outlined in the American Concrete Institute (ACI) specifications for Concrete Building (ACI 301-84) -11.7.3 troweled finish and 11.9.1 finishing tolerances. Leveling compounds should be Portland cement based. Gyp-Crete is not recommended as a suitable substrate for Statguard® ESD Modular Carpets.

**New concrete slabs.** Before priming with the recommended ReSource Technologies 3300 barrier coat, new concrete slabs must be fully cured, which usually requires about 90 days. New concrete must always be tested for moisture emission and excessive alkalinity.

**Existing concrete slabs.** It is recommended to prime with ReSource Technologies 3300 barrier coat if chemicals were used to remove the old finish. Old floor covering adhesives, paint sealers, grease, oil, and other foreign materials should be removed then covered with a barrier coat to avoid possible adhesive contamination.

Keep in mind that changing floor - covering products can also change the rate of vapor emission coming from old concrete slabs. This change could create moisture problems. Moisture testing must be done prior to installation of Statguard® ESD Modular Carpets to make certain vapor emission rate will not become a problem.

**Patching compounds.** Cracks and holes must be patched with approved patching compounds. Most must be mixed with latex rather than water to avoid cracking or chipping. Recommended patching compounds include Lev-L-Astic, IFixall, Armstrong 5-180, Webpatch, or ARDEX K-15T4. Ardex K-15T4 is the only patching compound currently recommended that is designed to be mixed with water, per manufacturer's instructions, and still provide an excellent substrate.

**Barrier patching.** Once the sub-floor is patched and patched areas have dried, remember it is recommended to seal with ReSource Technologies 3300 barrier coat.

**Over vinyl tile.** Replace or patch loose tiles and remove wax coating. It's extremely important to remember that cutback adhesives will damage the backing on Statguard® ESD Modular Carpets. ReSource Technologies 3300 barrier coat is recommended to be used to prevent backing contamination. Excessive cutback adhesives should be reduced / knocked down before application of the 3300 barrier coat.

**Over wood.** Sand finish down to bare wood. Repair loose or broken boards and other defects for a smooth surface.

**Over tongue and groove.** Securely fasten boards to sub-floor with 8-D cement coated screw nails. Sand cupped or uneven wood strips until level. If boards are worn or badly cupped, cover with 5/8 inch (1.6 cm) exterior grade AD plywood secured with 8-D cement coated screw nails spaced 6 inches (15.2 cm) apart. Sand seams smooth.

**Other wood floors.** Cover single layer plywood or particleboard floors with 5/8 inch (1.6 cm) exterior grade AD plywood. Secure with 8-D cement coated screw nails spaced 6 inches (15.2 cm) apart. Sand seams smooth. If double layered floors are sound, apply latex top coat to make smooth and level. Sand if necessary.

**Granolithic, terrazzo, marble, ceramic.** Patch or fill cracks and irregularities, including ceramic tile grout lines, with latex-mixed patching compound. Remove surface gaze by rough sanding.

### **Before starting**

**Construction site.** Far too often, carpet products are installed before the construction site is reasonably accessible or ready. Carpet can be permanently damaged or stained during the construction process. Please understand that Statguard® Flooring will not be held responsible for any staining, soiling, contamination or damage caused by building construction. Both the installer and the general contractor should consider the risks when installing carpet before other construction site trades have completed their work. Paints or lacquer over spray, spills, excessive soiling are among a variety of possible job site contaminates that will void the owner's product warranty.

**Temperature and lighting.** Job site and all products or materials to be used in the installation must be preconditioned at a temperature between 60 degrees F (15.50°C) and 95 degrees F (350°C) for a period of 48-72 hours before installation begins. The temperature must remain within this range throughout the installation. Lighting must be in service to allow inspection under specified lighting conditions.

Correct carpet. Installer must verify carpet conforms to owners specifications, including correct product and color. Each carton contains 20 tiles (or 5.98 square yards). Labels on each carton contain, important information including product, color, and dye lot.

Do not mix dye lots or run numbers in the same area. Statguard® Flooring will not be responsible for sorting or reinstalling mixed lots. Once an incorrect color or product has been installed, Statguard Flooring will not be held responsible or assume related costs for corrective action.

Tools required. Inch/metric steel measuring tape, white chalk line, carpet knife, straight edge, and paint roller or straight edged trowel (for Conductive Adhesive # [81303](#)).

**NOTE: Statguard® ESD Modular Carpet requires Special Installation using Full Spread Conductive Releasable Adhesive and Braided Ground Straps.**

### **Grounding ESD Modular Carpets:**

It is necessary to properly ground the Statguard® Conductive Floor Adhesive in order to provide proper ground to the Statguard® Floor Tile. We recommend that this be done using the Statguard® braided ground strap which is supplied with the adhesive.

Before applying adhesive and laying tiles, locate a properly grounded electrical receptacle that you will use as your source of building ground. It is recommended to have this location in the middle of the longest edge or sensibly chosen to give equal distance to ground from the flooring space. If multiple braided ground straps are used, space them evenly as needed. The number of ground wires will vary with the number of square feet. We recommend one braided ground strap for every 2,000 square feet.

Disconnect the power at the electrical panel for the receptacle being used. Remove faceplate of outlet receptacle.



*Figure 1. Use ground screw of electrical outlet connected to metal junction box and equipment ground for grounding.*

Pull the outlet out of the outlet box to gain access to the outlet ground. The ground strap can be either run up the wall or be run inside the wall for connection to the receptacle ground.

Attach braided 36" ground strap, # 8 ring terminal end, to the outlet box using the outlet box ground screw terminal.

If no screw ground terminal is in the outlet box, use the ground screw terminal on the outlet itself. Replace the outlet into the outlet box and install faceplate. Test ground strap for proper grounding by checking continuity or by measuring resistance from the end of a braided ground strap to equipment ground. Resistance should be <1 ohm and as the building's electrical system is connected, the measurement can be made from the ground of a three wire electrical outlet. It is recommended to coil and keep the remaining length of the ground strap off of the floor to prevent possible damage prior to adhesive and tile installation.

During the adhesive application, lay the ground strap into the adhesive pointing to the center of the room. Simply lay the tile or tiles over the ground strap and upon adhesive set up your grounding will be complete.

Should you require further assistance please call (781) 821-5609.

## Installation, Conductive Adhesive, Grounding, and Testing

### Centering, squaring the installation.

Divide the room into four quadrants and snap a chalk line. Make sure quadrants meet at right angles. Take care to keep perimeter tile cuts larger than half size or 9.84 inches (25 cm).

**Through doorways.** In order to spread Conductive Adhesive # [81303](#) throughout the room and allow for a single set up time, an additional perpendicular line should be established and squared from the centerline of the room to run through doorways. Care should be taken to measure a distance equal to an even number of tiles from the room's centerline to a point in the doorway. That point in the doorway will determine where the first tile is installed.

By establishing a line through the doorway and perpendicular to the centered chalkline-grid in the room, Conductive Adhesive # [81303](#) can be spread in the room. The installer can spread back through the doorway and begin a square installation in the doorway without having to track back through the Conductive Adhesive # [81303](#).

**Arrows point the way.** Statguard® ESD Modular Carpets have arrows printed on the backing showing pile direction. For monolithic installation, be sure arrows point in the same direction throughout the installation.

**Parquet installation.** Some products are designed to be installed only by the parquet method. Modular Carpets designed for parquet installations are marked accordingly. For parquet installation, arrows should point in the same direction every other tile and diagonally. Arrows on alternating tiles should be turned 90-degree parquet in either direction, consistently.

**Special needs problems.** Any uneven surface that cannot be leveled may require more Conductive Adhesive # [81303](#) to be applied.

**Raised panels.** A full spread of our # [81303](#) Conductive Adhesive using a 1/16" x 1/16" v-notch trowel is required. Raised floor panels are prone

to subtle flexing. To insure long-term uniform appearance, avoid matching raised floor seams with tile joints.

**Double-faced tape.** When double-faced tape is used to anchor cuts or rows, we recommend a cloth-type double-faced tape, such as the Model 223 double-coated cloth tape made by the Ideal Tape Company. For more information about this tape, call Ideal at (404) 879-8383.

**Technique.** To assure a tight installation at all tile seams, brush pile fiber back and tip individual tiles into place to avoid trapping pile fiber in the seam. Frequently check tile joints for proper alignment and firm edge-to-edge abutment at the tile backing rather than visual alignment from the face. Avoid excessively tight joints that can cause tiles to peak or buckle.

**Tipping tiles into place.** Tip individual tiles into place. (Corner first as pyramid takes shape.) Please take care to prevent tile corners from rolling under when tiles are positioned. Sliding tiles across the Conductive Adhesive # [81303](#) will cause corners to roll under and should be avoided. Frequently check tile joints for proper alignment and firm abutment. Avoid tight or overly compressed joints that can cause peaking edges or corners.

**Check tightness.** Expect a slight gain as the squares are installed because of spacing at the joints.

**Gain.** Determine the amount of gain by measuring 11 installed squares from edge to edge, spanning 10 seams. The measurement should be slightly more than 550 cm with a gain no greater than three millimeters (about 1/8-inch). If the gain exceeds 3 mm, tiles should be reinstalled and butted more tightly along backing edge. Reposition and check again.

**Cut tiles.** Fixtures, architectural elements, and perimeters will require tile cutting. Always cut tiles from the back. Always secure cut or partial tiles with Conductive Releasable Adhesive.

**Floor outlets.** Electrical floor outlets are usually wired after tile installation. Install tile over electrical boxes and mark locations with a piece of tape. Tiles can be lifted for cutouts later.

**Flat wire.** Keep flat wire runs centered under tile rows. Avoid using Conductive Adhesive # [81303](#) over flatware runs, as damage to flatware may result when tiles are removed.

**Trench headers.** Center trench headers directly under a full tile row. Secure tile rows on either side with a four-inch (10.2 cm) strip of Conductive Releasable Adhesive. This will prevent installation from shifting while servicing trench headers.

**Open Perimeter.** In open perimeter designs, use a fixed reducer strip to secure or lock in the tile area.

**Replacement.** It is strongly recommended that when ordering tiles and Conductive Adhesive # [81303](#) for your application to order additional tiles to be used for replacement at a later date. This will ensure the tiles are manufactured in the same lot.

Visual differences between new and old tiles will become less apparent in a few weeks. Pile brushing helps minimize differences. Also consider replacing damaged tiles with tiles removed from less visible areas in the installation.

**Under floor access.** Statguard® ESD Modular Carpets free-lay tiles allow quick access to under floor utilities and flatware. When removing and repositioning tiles, always replace in original position, taking care to brush fiber upwards out of tile seams and firmly abut backing edges.

**Protection.** Avoid dislodging tiles during furniture and fixture placement, by placing standard sheets of plywood or hardboard over the complete installation. Afterwards, vacuum the entire floor with a pile lifter. If pile lifter is not available, use an upright, cylindrical brush vacuum cleaner.

## Conductive Releasable Adhesive # 81303

This adhesive is a releasable, pressure sensitive adhesive specially engineered to install Modular Carpets with a Full Spread Conductive Releasable Adhesive, glue down installation. This acrylic adhesive is formulated to release and re-bonding of Modular Carpets while permanently retaining its tack, allowing individual tiles to be lifted out easily and replaced without substantial loss of adhesive properties for the life of the installation. This Conductive Adhesive was developed for the Installation of Statguard® ESD (ElectroStatic Discharge) Modular Carpets and flooring systems. Conductivity of the applied film is provided by a colloidal suspension of conductive black carbon.

Our Conductive Adhesive is non-flammable and both alkali and water-resistant. It is resistant to plasticizers migration from Modular Carpet backing and can be applied using common tools and techniques over a variety of sub-floor surfaces. It has low odor and "zero" calculated VOC's (based on no solvents used), which makes it ideal for use anywhere odor is a concern.

It also meets or exceeds California requirements as specified in rules 102 and 443, as well as, California SCAQMD Rule 1168. It is guaranteed for the life of the floor covering, and is especially valuable for specification work, as it tests below the VOC emissions limit of ASTM D-5116-97.

### Application Instructions

It is important that all products to be used in the installation be preconditioned at a temperature between 65 and 95 degrees F for at least 48 hours before beginning the installation. Installation should be carried out at a room temperature between 65 and 95 degrees F with relative humidity readings between 10% and 65%.

For a reliable path-to-ground, it's important that each Statguard® ESD Modular Carpet Tile be secured by # [81303](#) Conductive Releasable Adhesive. The entire floor area requires a Full Spread of Conductive Releasable Adhesive with a 1/16" x 1/16" v-notch

trowel. More Conductive Adhesive should be applied where heavier traffic is expected or where rolling carts are frequently used.

A Full Spread Conductive Releasable Adhesive is recommended for static dissipation, and coverage will vary according to the sub-floor type and application method.

Once spread, allow Conductive Releasable Adhesive to dry for 30 to 45 minutes or until the surface becomes tacky to the touch, but no Conductive Releasable Adhesive is transferred to the fingertip. As drying takes place, the Conductive Releasable Adhesive will appear to darken. Drying speed will vary according to temperature of the sub-floor, porosity of the sub-floor, temperature of the air and components, relative humidity, as well as dryness of the floor and the thickness of the application. If the Modular Carpets are installed with the Conductive Releasable Adhesive in, the wet stage or before sufficient drying has occurred, important release and re-bonding properties will be affected. Modular Carpets can be installed anytime after the Conductive Releasable Adhesive has dried to the touch.

**Coverage:** 225 - 270 square feet per gallon.

**Warning:** Causes eye and skin irritation. May be harmful if swallowed. Do not taste or swallow. Avoid contact with the eyes, skin and clothing. Rubber gloves and safety glasses recommended during use. Wash thoroughly after handling. For commercial use only; keep out of reach of children.

### First Aid-in case of eye or skin

**contact:** Immediately flush eyes with plenty of water for at least 15 minutes and wash skin with soap and water. Remove contaminated clothing and shoes. Call a physician if irritation persists. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Call a physician.

**Clean-up:** Clean up may be accomplished using soap and water if the Conductive Releasable Adhesive has not dried. Dried or tacky Conductive

Adhesive will require the use of an appropriate safety solvent.

**Storage / Handling:** Store in a cool dry place, away from heat sources. Do not allow product to freeze.

**Ingredients per New Jersey Right to Know:** Water (CAS # 7732-18-5), acrylic latex (NJS50115NVE), antistat (CAS # 9003-04-7), polyacrylate thickener (CAS # 2512-88-8), alkali (CAS # 1310-58-3).

Contact Statguard® Flooring office at (781) 821-5609 or visit our web site @ [www.statguardflooring.com](http://www.statguardflooring.com) for Material Safety Data Sheets and Warranty Information.

**Important advice.** These installation procedures are recommendations designed for the experienced and competent Modular Carpet installer. Strict adherence to these procedures will result in a quality installation under most conditions.

Any situation that could alter the installation procedure or jeopardize the possibility of a satisfactory installation, such as identification of defective material or unusual installation conditions, creates a responsibility for the installer to STOP the installation immediately and call Statguard® Flooring at (781) 821-5609.

Statguard® Flooring will be responsible, within the scope of product guarantees, for defective materials, but this does not include materials with defects identified after the installation. Statguard® Flooring will not be responsible for workmanship or problems caused by improper installation.

Problems caused by varying from any part of these instructions will become the responsibility of the installer and not Statguard® Flooring. Problems created by varying from these instructions will void all otherwise applicable warranties for the product.

## Integrity Testing

At initial installation, and quarterly, ESD protective floor including those of Statguard® ESD Modular Carpets should be tested verifying resistance to ground (RTG) of less than 10E9 ohms by a Surface Resistance Test Kit.



Figure 2. Testing RTG with Surface Resistance Test Kit.

## Limited Warranty

Statguard Flooring warrants that: Statguard® ESD Modular Carpets will be free from defects in materials and workmanship for a period of fifteen (15) years after purchase, and will meet the minimum technical requirements of ANSI/ESD S20.20 for ESD Floors.

This warranty shall apply only if such products are installed following the Statguard Flooring Installation Instructions document including using the recommended conductive adhesive and copper foil grounding strips and have been tested by an authorized Statguard Flooring personnel after installation. Such warranty shall be voided if such products are removed from the site of their original installation.

Within the warranty period, a credit for purchase of replacement Statguard® ESD Modular Carpets, or, at Desco's option, the Statguard® ESD Modular Carpets will be repaired or replaced free of charge. If product credit is issued, the amount will be calculated by multiplying the unused portion of the expected ten years life times the original unit purchase price.

Call Customer Service at (781) 821-5609 for a Return Material Authorization (RMA) and shipping instructions and address. Include a copy of your original packing slip, invoice, or other proof of purchase date. Any material under warranty should be shipped prepaid to our factory. Warranty repairs will take approximately two weeks.

If your material is out of warranty, Statguard Flooring will quote repair charges necessary to bring your unit up to factory standards. Call Customer Service at (781) 821-5609 for a Return Material Authorization (RMA) shipping instructions and address. Ship your material prepaid.

## Warranty Exclusions

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

## Limit of Liability

In no event will Statguard Flooring or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.

**STATGUARD FLOORING**

90 HUDSON ROAD  
CANTON, MA 02021  
PHONE (781) 821-5609  
FAX (781) 575-0172  
[StatguardFlooring.com](http://StatguardFlooring.com)