Static Control Vinyl Floor Tile Installation Tips

Figure 1. SCS 8400 Series Vinyl Floor Tile.

Subfloor Condition and Preparation

- The subfloor must be clean, dry, free of contaminants like paint, oil, or wax, and free of defects like cracks, holes and projections; patch any defects or irregularities with latex-fortified cementations underlayment material that meets floor load requirements.
- The subfloor must also be level to avoid misalignment of rows of tile during installation. If needed, level the floor with latex-fortified cementations underlayment material that meets floor load requirements.
- Remove any mastic or adhesive left from previous flooring or cover it with at least 1/8" (3 mm) of cementations underlayment material that meets floor load requirements.
- New concrete must be adequately cured; the product warranty does not cover problems or failures due to moisture. Ideal curing time for a new concrete subfloor is three months after the pour has been completed and the building enclosed. The key determinant for "full cure" is measurement of the MVTR (Moisture Vapor Transmission Rate) of the concrete.
- The surface of the concrete should be roughened to achieve optimum bond of the tile adhesive; mechanically shot blast or otherwise abrade all subfloor surfaces, old or new. The ideal surface texture is similar to that of 80- or 100-grit sandpaper.

Subfloor Moisture Considerations

Excessive moisture in or beneath the concrete subfloor can cause adhesion or appearance problems for any type of floor covering. Measure the MVTR of the concrete prior to tile installation, using industry-standard calcium chloride type test kits. Place one test kit for every 1,000 square feet of floor space, or three kits in any single room, whichever is greater.

The average of all MVTR test results must be less than 3 pounds per 1,000 square feet per 24 hours; for any single reading, the maximum allowable value is 3.5 pounds. Record the test results and keep them with the job file. Based on industry experience, floors on concrete that meet this guideline have a low probability of moisture-related problems.

Conductive Adhesive

Use only a SCS-approved conductive adhesive to install SCS vinyl floor tile. Follow all instructions that come with the adhesive, including recommended trowel size, recommended spread rate, and open time.

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:
- 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.
- 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.

Note: Static Control Vinyl Floor Tiles Require Special Installation using Conductive Adhesive and Copper Foil Grounding Strips.

Material Considerations

Precondition the tile and adhesive to the environment of the job site for at least 48 hours prior to installation. Store the materials in the ambient conditions of the installation location and at the recommended installation temperature (65°F to 85°F). Stack the cartons of tile upright, no more than 5-high. Check shade lot numbers before beginning the installation to ensure that like shade lot numbers are installed in an area.

Figure 2. Clean the floor of dust and debris.

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.
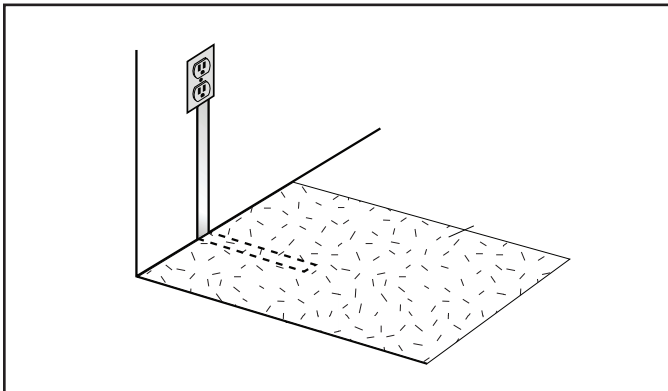

Figure 3. Position and install SCS 8404 copper grounding strips.

Ground strips should be installed prior to application of the conductive adhesive and tile, which will be applied directly on top of the copper strips. 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, with a minimum of two (2) in any individual room.

Caution: The edges of the copper strips are very sharp.

Installation and Grounding

Apply each strip as shown (Figure 2), 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.

Floor Tile Layout

Locate and mark the center of the room. Lay out the application pattern for the floor tile in sections, starting in the center and working outward. Mark the sections with chalk lines.
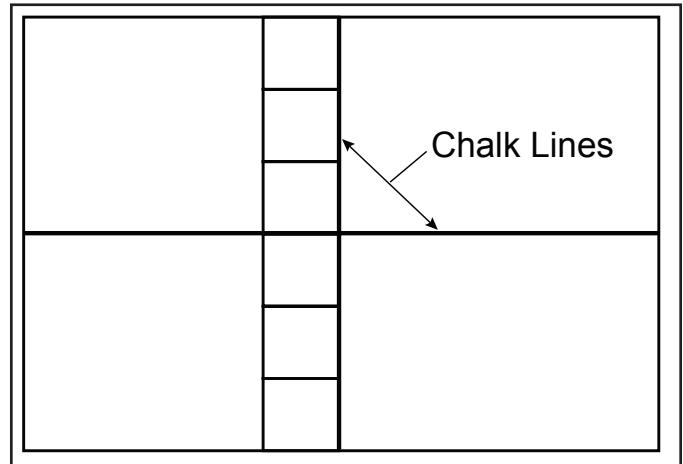

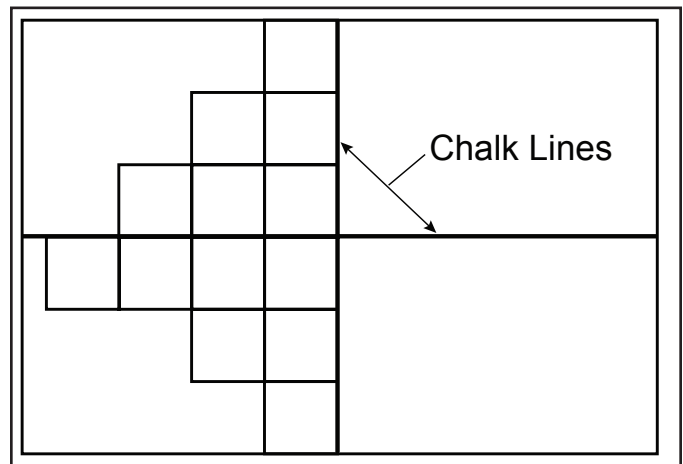*Figure 4. Locating and marking the center of the room.*

Adhesive Spread Rate

Figure 5. Measuring the proper spread rate for 8403 Conductive Floor Tile Adhesive.

To control the proper application of the adhesive, size each section to match the recommended spread rate; for example, the typical spread rate for 8403 Conductive Floor Tile Adhesive is 135 square feet per gallon unit, so a section 3' x 45' would be appropriate. Commonly used layout patterns are straight line (Figure 4) or pyramid (Figure 6).

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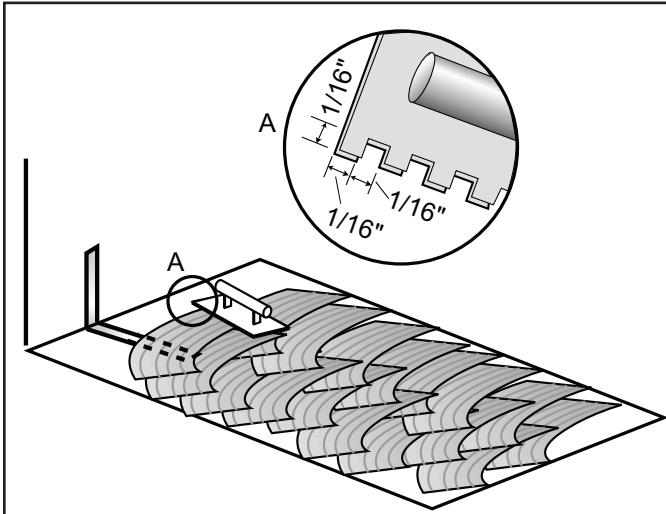
CONDUCTIVE ADHESIVE APPLICATION

Figure 6. Spreading 8403 Conductive Floor Tile Adhesive.

Mix the adhesive thoroughly, following instructions on the container. Spread adhesive over the first marked section, using the designated trowel size. (For 8403 Conductive Floor Tile Adhesive, the proper notch size is 1/16" square notches on 1/16" centers.) (Figure 5) 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.

TILE INSTALLATION
Avoid kneeling on freshly laid tiles by working from the "dry side." If it is necessary to work from on top of freshly laid tiles, use a kneeler board. Carefully "drop" each tile into place and press adjacent tiles firmly together; do not slide the tiles into place. Within 30 minutes after installation, roll each section of tile with a approximately 150 pounds (68 kg) sectioned roller to firmly embed the tiles into the adhesive. Roll the tiles twice in perpendicular directions. The goal is to get the adhesive to cover 80-90% of the backside of each tile. Throughout the installation, periodically lift pieces of tile to help ensure that this is being achieved.

ADHESIVE CLEAN-UP
Adhesive can ooze up through the seams and smear onto the tile surface. Immediately clean up any smeared adhesive with clean, soapy water and a clean rag. It is critical to rinse the rag thoroughly during use or to frequently use clean rags. Any adhesive not cleaned up immediately will be very difficult to remove after it cures.

CURING TIME
Newly installed tile can be walked on after the adhesive has had at least 24 hours to cure. Wait at least 48 hours before moving equipment or allowing rolling traffic onto the floor.
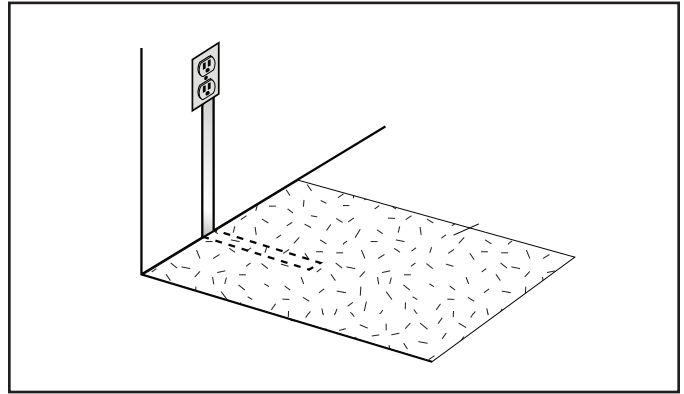
GROUND STRIP CONNECTION

Figure 7. Properly grounding copper ground strips.

Note: The 8404 copper ground strip is designed with ground options to building ground or to electrical outlets. The strip has 1/4" and 1/8" pre-punched holes.

Maintenance for Static Control Vinyl Floor

Never Wax 8400 Series Static Control Vinyl Floor Tile. Sweep or damp mop the entire floor and then clean it using a low-speed buffer (150-350 rpm) with a 5100 Red Buffer Pad and a neutral-pH cleaner (Statgaurd® 46030 Neutral Floor Cleaner). If ground-in dirt or scuff marks remain, use a 5300 Blue Cleaner Pad with the cleaner.

Note: A trigger-spray bottle of Statguard® 46020 Stripper may also be useful for spot removal of small, heavily soiled areas or scuff marks. Once the floor has been cleaned and allowed to dry, use a clean, dry Red Buffer Pad 5100 to buff the tile to its natural sheen.

Made in Canada.

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

See the SCS Warranty -
http://staticcontrol.descoindustries.com/warranty.aspx