

3M 8400 Series Static-Dissipative and Conductive Floor Tile

Installation Information for Flooring Contractors



Fig. 1

Preparation

Clean floor of dust and debris. (Figure 1)

Any pieces of debris that remain on the subfloor may telegraph through the tile and be seen as bumps on the finished surface.

Grounding Strip Installation

All of the necessary copper grounding strips should be installed prior to the application of the conductive adhesive and tile.

Determine the proper locations for the copper grounding strips. Locations should be selected along walls or at columns where there is access to a grounding point (e.g., an electrical outlet). There must be at least one (1) grounding strip installed for every 1000 square feet of floor area or a minimum of two (2) in any room.

Remove the paper liner from the adhesive side of the copper strip.
(CAUTION: THE EDGES OF THE COPPER STRIPS ARE VERY SHARP.)

Apply each strip as shown (Figure 2) using the adhesive side to position about two-thirds of the strip on the floor and the rest of the strip up the vertical wall or column.

The conductive adhesive and ESD floor tile will be laid directly on top of the copper strips (Figure 5).

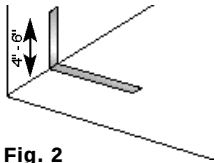


Fig. 2

Floor Tile Layout

Typically, floor tile is laid in sections, starting in the center of the room, marked with chalk lines (Figure 3). The size of each section should be approximately 135 square feet to correspond with the amount of adhesive in a gallon unit. Typical patterns are straight-line (Figure 3) (3 ft. by 45 ft.) or pyramid-shaped (Figure 4).

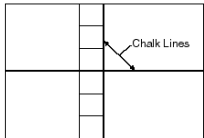


Fig. 3

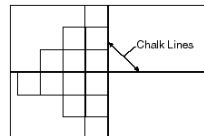


Fig. 4

Conductive Adhesive

Mix the two-part conductive epoxy adhesive per the instructions on the container. Spread the adhesive over the first application section using a notched trowel with 1/16" square notches on 1/16" centers. (Figure 5). The applied adhesive should sit for about 20 minutes prior to tile installation to allow any residual solvent to "flash off." At ground strip locations, the adhesive should be spread directly over the copper grounding strip. Working time for the mixed adhesive is approximately one hour; this may vary with the ambient temperature.

Tile Installation

The installer should work from the "dry" side to avoid kneeling on freshly laid tiles. If it is necessary to work from on top of freshly laid tile, a kneeler board should be used.

Each floor tile should be "dropped" in place (do not "slide" the tiles into place) and the tiles should be pressed firmly together. Each section of the finished floor should be rolled with a 150-pound (75-kilogram) roller (minimum) approximately one-half hour after installation; the goal is to have 90% minimum adhesive coverage on the backside of each tile after rolling.



Fig. 5

Immediately clean up any adhesive that may come up through the seams between tiles.

Use clean, warm, soapy water with a clean rag. Rinse the rag frequently during use. Any adhesive that is not cleaned up immediately will be much more difficult to remove after it cures.

Newly installed tile can be walked on after the adhesive has cured for 24 hours. Wait 48 hours before allowing equipment or rolling traffic onto the tile.

Ground Strip Connection

Each copper ground strip must be attached to ground. To ground in accordance with ANSI/ESD Association Standard S6.1, use a #14 or larger copper wire with a ring-tongue terminal at each end. One end is connected to a grounded receptacle and the other is screwed or crimped to the copper strip on the wall or column. (Figure 6)

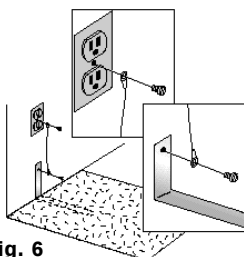


Fig. 6

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