

Technical Bulletin #47 Key Epoxy Terrazzo Pinholes

Pinholes (also referred to as micropores) are defined as spheres or circular voids that have half or more of their shape revealed and are normally filled by the grouting process. They are reasonably defined as 1/16" diameter or less in size. These micropores can be difficult to fill as the grout resin sometimes will not displace the air in the void effectively. Therefore, these micropores may not be completely filled but will be closed with a skin coat of resin. Over time these skinned over micropores may open again with exposure to traffic and maintenance.

Pinholes (micropores) are the result of air that has been entrained into the terrazzo mortar topping during the normal mixing process. This same condition exists in concrete and other resin-based floors, but the air pockets are not significantly exposed since the surface of those systems are not abraded with a grinding process. However, when epoxy terrazzo is ground to reveal the aggregate chips, the pinholes are exposed.

A grouting process is used to fill as many pinholes as possible. Various processes are used but basically a resin coat is applied to fill these voids. After the grout has cured, the floor is polished to again expose the aggregate.

During polishing, these holes are impossible to see while the floor is wet but become noticeable as it dries.

The number and size of the micropores will vary due to several factors including the installation temperature, the type, size, and mix design of the aggregate blend, and the viscosity and color of the epoxy resin.

It should not be construed that the appearance of pinholes indicates a lack of integrity or a loss of performance; it is the nature of the product. Relative to industry standards for such conditions, when such pinholes appear to a minor extent in various areas of the floor installation, they would be considered normal.

It is not uncommon for there to be random micropores (pinholes) about the diameter of a standard wire paper clip or the head of a straight pin as they are inherent in the terrazzo flooring surface.

With a regular maintenance program, terrazzo sealers will ordinarily fill and significantly close the majority of finer sized pinholes.

Note: All evaluations are to be made looking straight down from a standing position without using special lighting or equipment that provides magnification.

Terrazzo is an in situ created product by human craftsmanship and the installer must endeavor to meet the standards for the entire project. However, the terrazzo should not be arbitrarily rejected for relatively minor non-compliance. This is especially true if the overall functional and aesthetic values were satisfied.

Contact Key Resin Technical Service for further information.

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