

Technical Bulletin #42 Key Epoxy Terrazzo Glass Aggregate Considerations

Glass aggregate has become a more prevalent chip selection for the aggregate design mixtures of Key Epoxy Terrazzo Flooring. Besides offering a unique color pallet not available from marble chip, glass aggregates add depth, and offer the “green” benefits of recycled glass which contributes to LEED credit MR-4.1.

It is important to understand the technical and performance characteristics of Key Epoxy Terrazzo using glass chips. Key Resin Company and The National Terrazzo and Mosaic Association (NTMA) have discovered examples of fractured glass occurring in an installed epoxy terrazzo floor.

When most of the aggregate mix design is either clear glass or very light-colored glass (without contrasting colored aggregates of either glass or marble), which are often used in a dark-colored epoxy resin matrix, the result may be less than desirable. Some of the glass chips may become fractured, leaving a white “hazy” or “crystal like” appearance. This phenomenon may be aggravated by larger size glass chips such as #2, or thin pieces of glass versus thicker chips. Fractured glass may eventually break down further and leave a void in the surface of the epoxy terrazzo, requiring spot repair by filling with the epoxy resin matrix.

The possible causes of fractured glass chips may include:

- 1) Heavy foot traffic in particular areas, heavy point loads from “spike” style high heels.
- 2) Heavy objects being rolled or dropped on the floor.
- 3) Construction abuse.
- 4) Heat/friction generated during burnishing of floor.

Key Resin Company recommends sharing these “field observations” with designers. Key Resin recommends that clear and light-colored glass in dark epoxy matrices be kept to a “design minimum.”

REV 08/30/21 v1.0