

Technical Bulletin #39 Key Epoxy Terrazzo Exterior Installation Problems

Key Resin Company does not recommend installing Key Epoxy Terrazzo in exterior environments. The Key #108 Epoxy Terrazzo Matrix is not available in a UV light resistant formulation, Key Resin does not manufacture an acceptable alternative UV stable resin suitable for use as terrazzo binder resin.

A few points to consider:

1. Key #108 Epoxy Terrazzo Matrix will discolor/fade with exposure to sunlight. This will still occur with a clear aliphatic UV light resistant sealer such as urethane or polyaspartic, as these clear sealers do not contain UV light inhibitors or blocking agents.
2. UV light in combination with exposure to air (oxygen) will also cause a “chalking” reaction, resulting in a permanent white hazy film, this is a microscopic degradation of the surface of the epoxy. Though a clear aliphatic urethane or polyaspartic sealer may slow this reaction and reduce the visual appearance of the white film, there is anecdotal evidence that longer term exposure of air through microscopic pores in the clear sealer may still cause enough surface degradation in the epoxy to potentially cause loss of bond and eventual delamination of the clear sealer, this may take several years to manifest.
3. The thermal coefficient of expansion/contraction of Key Epoxy Terrazzo is much greater than concrete. In an exterior environment exposed to temperature fluctuation (hot daytime versus night, winter versus summer, etc.), greater stress is created at the bond line between the epoxy and concrete due to this difference in expansion/contraction properties. This can lead to possible delamination over time, resulting in hollow spots, heaving, and cracking.

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