

## Technical Bulletin #6-B Crack Treatments

### Crack Repair Recommendations in Concrete Slabs (Supersedes Content in Technical Bulletin #6)

#### Crack Treatment Procedure

Rout cracks larger than 1/16" using a crack chaser saw, angle grinder, or chipping hammer, and vacuum out debris. Fill crack with rigid epoxy (e.g., Key #715 paste, Key #730 gel, Key #502, Key #515, or other resin approved by Key Resin). Crack may be gravity filled or pressure injected as necessary. Pressure injection procedure may require the use of injection ports adhered over the crack and sealing the surface of the adjacent exposed crack with epoxy paste/putty. Allow epoxy paste/putty to cure hard before beginning injection process. Cracks less than 1/16" do not require routing before filling, but may require vacuuming to remove any dust, etc. If floor is to be covered with a resin floor or epoxy terrazzo floor topping, proceed as outlined below. Excess cured epoxy on surface of filled crack may require grinding flush with the adjacent concrete if desired for aesthetic reasons.

Apply Key #580 Flexible Epoxy Membrane across the crack at a minimum of 24 inches width at a spread rate of 40-50 square feet per gallon to achieve 32-40 mils dry film thickness. Optional membrane reinforcement: Apply fiberglass scrim cloth to the surface of the *cured* Key #580 using Key #502 Epoxy Primer to adhere and saturate the cloth. Scrim cloth may also be carefully placed onto surface of wet/tacky Key #580, being careful to lightly press cloth into resin using a trowel or paint roller, fully saturate cloth with resin. Allow to cure prior to placement of resin floor system.

For extensive cracking where individual crack treatment is not practical: Apply Key #580 Flexible Epoxy Membrane over entire floor surface as a crack reduction membrane at a spread rate of 40-50 square feet per gallon to achieve 32-40 mils dry. Optional membrane reinforcement: Apply fiberglass scrim cloth as outlined above. Caution: Extensive cracking may be evidence of a poorly designed or installed concrete slab and may require complete replacement. Consult with ACI (American Concrete Institute) and the appropriate structural/civil engineer to determine if a slab meets the project requirements.

Consult with Key Resin Technical Service to discuss any modifications to these procedures.

**Important Precaution:** This procedure is considered "industry best practice" and has been used successfully on numerous projects for many years. However, this procedure is *not* guaranteed to completely eliminate the potential risk of excessive expansion/contraction movement causing a telegraphing stress line (evident as a colored or white line), hairline crack, or raised ridge in the Key Resin Flooring System. A future repair may be necessary.

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