

Crack Injection Guide for ETI-SLV, ETI-GV and Crack-Pac® Injection Epoxy

INJECTION TIPS

- If using a pneumatic dispensing tool, set the tool at a low setting when beginning injection and increase pressure if necessary to get the epoxy to flow.
- For narrow cracks, it may be necessary to increase the pressure gradually until the epoxy begins to flow. It may also be necessary to wait for a few minutes for the epoxy to fill the crack and travel to the next port.
- If desired, once the injection epoxy has cured, remove the injection ports and paste-over. An epoxy-based paste-over can be removed with a chisel, scraper or grinder. The paste-over can be simply peeled off if CIP-LO is used. Using a heat gun to soften the epoxy is recommended when using a chisel or scraper.
- Mixing nozzles can be used for multiple cartridges as long as the epoxy does not harden in the nozzle. For injection epoxies in side-by-side cartridges, care must be taken to ensure the level of material is the same on both parts of the cartridge. This can be done by checking for air in the cartridge and the positions of the wipers in the back of the cartridge. If the liquid levels are off by more than 1/8", then Step 1 from the injection procedures must be repeated.

TROUBLESHOOTING

Epoxy is flowing into the crack, but not showing up at the next port.

This can indicate that the crack either expands and/or branches off under the surface of the concrete. Continue to inject and fill these voids. In situations where the crack penetrates completely through the concrete element, and the back-side of the concrete element cannot be sealed (e.g., basement walls, or footings with backfill), longer injection time may not force the epoxy to the next port. This most likely indicates that epoxy is running out the unsealed back side of the crack. In this case, the application may require a gel viscosity injection epoxy (ETI-GV) or may not be suitable for epoxy injection repair without excavation and sealing of the back side of the crack.

Epoxy is leaking from the pasted-over crack or around injection ports.

Stop injecting. If using a fast-cure paste-over material (ETR or CIP-LO), wipe off the leaking injection epoxy with a cotton cloth and reapply the paste-over material. Wait for the epoxy to completely harden. If the leak is large (e.g., the port broke off of the concrete surface), it is a good idea to wait approximately 30 minutes, or longer as necessary, to allow the paste-over to cure more completely. Check to see that the epoxy is hard before re-injecting, or the paste-over or ports may leak. Another option for small leaks is to clean off the injection epoxy and use paraffin or crayon to seal the holes.

More epoxy is being used than estimated.

This may indicate that the crack either expands or branches off below the surface. Continue to inject and fill these voids. This may also indicate that epoxy is running out the back side of the crack. If the crack penetrates completely through the concrete element and cannot be sealed, the application may require a gel viscosity injection epoxy (ETI-GV) or may not be suitable for injection repair.

Back pressure is preventing epoxy from flowing.

This can indicate several situations:

- The crack is not continuous, and the portion being injected is full. (See above instructions about injection after the port has reached refusal.)
- The port is not aligned over the crack properly.
- The crack is blocked by debris.
- The injection epoxy used has too high a viscosity.
- If the mixing nozzle has been allowed to sit for a few minutes full of epoxy, the material may have hardened in the nozzle. Attach the E-Z-Click™ fitting to a port at another un-injected location on the crack and attempt to inject. If the epoxy still won't flow, chances are the epoxy has hardened in the nozzle. If so, replace the nozzle.

Less epoxy is being used than estimated.

This may indicate that the crack is shallower than originally thought, or the epoxy is not penetrating the crack sufficiently before moving to the next port. Reinject some ports with a lower-viscosity epoxy to see if the crack will take more epoxy. Another option is to heat the epoxy to a temperature of 26–37°C, which will reduce its viscosity and allow it to penetrate into small cracks easier. The epoxy should be heated uniformly; do not overheat cartridge.