

STEP BY STEP PROCEDURE FOR CRACK & JOINT INJECTION

BASIC EQUIPMENT LIST

- Resin and Accelerator
- Injection Packers
- Crack Cleaning Agent
- Pump Flush
- Hydraulic Cement
- Pumps (Resin and Water)
- Plastic Pail for Mixing
- Rubber Gloves, Goggles
- Hammer Drill and Bits
- Extension Cord Light
- Hand Tools Rags
- Garbage Bags Poly

1

Identify cracks and joints to be repaired using paint or chalk.

2

Clean concrete surfaces by grinding or pressure washing a minimum of 2" on each side of the crack or joint.

3

Using a SDS type hammer drill, drill $\frac{3}{8}$ " diameter holes on a 45 to 60 degree angle in order to intersect the crack or joint at the mid-point of the wall.

When possible, alternate or stagger the drill holes on each side of the cracks.

Drill holes should be spaced between 10" to 12" apart.

Never exceed a 12" spacing between drill holes.

4

Flush the drilling debris from the drill holes with copious amounts of water.

5

Following the manufacturers written instructions, install $\frac{3}{8}$ " plastic friction fit packers into the drill holes.

6

Using a cordless drill set at low speed and equipped with a $\frac{5}{16}$ " nut driver, carefully install the zerk fitting into the plastic packer.

Do not over tighten.

7

Using an airless piston pump, equipped with a multi valve header c/w 0-3000 PSI pressure gauge, inject each packer with a 5% solution of Specton Crack Cleaning Agent until the injected material is seen exiting the face of the crack or joint.

A maximum pressure setting on the pump for the cleaning procedure should be 1000-PSI \pm 100 PSI.

8

Using the same or similarly equipped pump that was used for injecting the cleaning agent, re-inject each packer with copious amounts of clean water.

9

In order to create confinement for the Polyurethane Injection Resin and improve its cured density, apply a surface seal over the face of the crack or joint.

Surface seal materials can be hydraulic cement, patching compound, thixo-tropic epoxy gel or mechanically fastened strips of wood. Allow the surface seal to harden prior to resin injection. *(See note next page.)*

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9 (Continued from previous page.)

Note: If the crack or joint is leaking, remove the zerk fittings from the packers and allow the leaking water to flow through the packers. Diverting the water will facilitate the installation of the surface seal.

10

Using an accelerator dosage of between 2 to 5%, mix Specton Flex F1000 Resin and Accelerator in a clean and dry plastic pail. Mix the material for a minimum of 2 minutes with a high-speed drill and mix paddle.

Mix in a fashion that will minimize drawing air into the mix.

11

If not already removed from step 9, using a cordless drill c/w $\frac{5}{16}$ " nut driver, unscrew and remove all of the zerk fittings except for the zerk located at the lowest packer (when doing vertical cracks or joints).

For horizontal cracks or joints, select a start location and leave that zerk fitting in while removing all the others.

12

Using an airless piston pump equipped with a multi valve header c/w 0-3000 PSI pressure gauge, start the resin injection at the lowest packer location. Inject until clean resin is observed exiting the adjacent packer.

13

Using a cordless drill, screw the zerk back into the packer where resin was observed exiting.

14

Hook up the resin pump to the next packer and repeat the process until the crack or joint is full.

Note: Typical polyurethane injection pressures should not exceed 1500 PSI at the header.

15

After the polyurethane injection is complete, flush the pump with Specton Pump Flush as per the manufacturers instructions.

16

Remove any cured polyurethane from the concrete surfaces as part of clean up.

17

When possible, allow 24 hours for the resin to cure, prior to the removal and patching of packer holes.

Note: This specification and step-by-step procedure has provided contractors and engineers with predictable and excellent results.

Modifications to the specification are normally required to meet the needs of each different injection project.

Call **Specton** at **1-866-773-2866** to discuss possible changes to the procedure to meet your specific project.

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