

INSTRUCTIONS AquaBond® PFK-377 or DMK-377

Expanding Polyurethane Foam Crack Injection Kit for Leaking Concrete Swimming Pools

Our PFK-377 Kit includes 2-Part Surface Seal paste, Expanding Polyurethane Foam, Injection Ports, Port Plugs, Water Bottle and Flush Hose, Rubber Fittings, Mixing Sticks, Putty Knife, Gloves and Detailed Instructions.
The DMK-377 kit also includes our DM-250 High Thrust Caulking Gun.

You will need:

- AquaBond PFK-377 or DMK-377 Crack Injection kit
- Caulking gun (which is included with the DMK-377 kit)
- Quart or more of fresh water
- Tarp and large trash bag
- Clean dry rags and paper towels
- Scrap cardboard for mixing Surface Seal
- Hammer
- Chisel

This process stops leaks by filling all voids and cracks completely through to the back of the concrete structure.

Please follow these instructions carefully:

IMPORTANT: CURE TIMES AND WORKING TEMPERATURES:

- Do not perform this repair below 40° F.

The recommended working temperature is between 55° and 85°.

- Between 55° and 85° the mixed Surface Seal will begin setting up within 4-7 minutes. The Surface Seal should be ready for injection after about 20-30 minutes.

- Between 40° and 55°, the Surface Seal working time is 8-12 minutes. You should allow at least 30 to 60 minutes of cure time before beginning the injection procedure.

SAFETY FIRST: wear gloves, eye protection and a mask during the entire process!

1. Lay down a protective tarp in order to keep area clean. Have some scrap cardboard for mixing the Surface Seal paste.

2. **PREPARE THE CONCRETE** Scrape and wire-brush away all flaking concrete, paint and other coatings. Wipe the surface clean. The surface may be damp or dry before attaching the injection ports and applying the Surface Seal, but there should be no actual wetness or standing water.

3. **INSTALL THE INJECTION PORTS** Using separate wooden sticks for each, take a portion of each jar of Surface Seal SS-37 (Part A and Part B) and place on the cardboard. DON'T mix up the sticks or cross-contaminate the parts A & B in their jars! Use a third stick to mix the material for 1-2 minutes.

NOTE: Mix the Surface Seal in small amounts to avoid waste. The more that is mixed at one time, the faster it will harden, so plan ahead.

Snip off the plugs that come attached to the ports and save them for later. With the mixing stick, pick up some of the mixed Surface Seal paste and liberally "butter" the first plastic port's flange on the front - and apply a thin coat on the back so it will stick to the prepared concrete pool surface.

NOTE: DON'T clog the hole in the port.

4. **STARTING AT THE LOWEST POINT** adhere the ports along the length of the crack. Be sure to align them directly over the crack. Repeat and install the rest of the ports about 12 inches apart along the length of the crack, working your way from bottom to top. Position each port carefully so the foam injection material will be able to flow in without restriction.

5. **COVER THE CRACK WITH SURFACE SEAL PASTE** Plan to use all of the Surface Seal that came in your kit. The amount we provide is designed to cover a 10' crack with a coating 1/8" thick and 2" wide.

Use the putty knife to apply a 1/8" thick, 2" wide coating of the mixed paste over the entire length of the crack itself. Smear the paste to create a complete seal along the outer surface of the crack, but don't force the Surface Seal paste into the crack! Just cover the crack, 1/8" thick, as if you were masking it with tape.

Add extra Surface Seal paste around the bases of the injection port flanges for a good seal.

Allow the Surface Seal to harden for about 30-60 minutes before starting the injection process. NOTE: You may begin injecting when Surface Seal is hard to the fingernail touch.

6. **ONCE SURFACE SEAL HAS HARDENED**, flush crack with water.

Fill the included accordion squeeze bottle with water. Attach the squeeze bottle hose to the highest port and flush the crack (using at least 6 or more full squirt bottles). Flush it all into the crack, top to bottom.

NOTE: Water should come out of EVERY port below the top one so you know

Note A. Butter Surface Seal onto the back and front of the port flanges. Don't clog the hole in the port, nor the crack itself. Stick the flanges about 12" apart, aligned over the crack. Now apply Surface Seal thoroughly over crack and flanges as in photos 2 & 3.



Photo 3
Finished port and Surface Seal installation

Ports

Simulated for clarity. Actual Surface Seal is white.



Note B. Start at the lowest port. When foam starts to ooze out of the next port up, immediately remove the nozzle and rubber tip, then insert a plug firmly into the port end to stop the oozing.

Start injecting that next port, and so on. Plug the port when foam oozes out.

the entire crack is wet and that there are no blockages within the crack, and that no ports are clogged. The water is also necessary for good adhesion and for activation of the foam resin curing process.

CAUTION: If water leaks out anywhere except the ports, you should seal that leak before injecting the polyurethane foam!

7. PREPARE THE CARTRIDGE FOR THE FOAM INJECTION PROCESS

7a. Mount a cartridge of AquaBond PF-37 Expanding Polyurethane Foam into your caulking gun. Snip off the tip of the cartridge. **NOTE: Be careful to not damage the threads.** Screw a long threaded nozzle (with rubber tip) onto the cartridge.

NOTE: Keep the port plugs handy so that you can plug each port when it starts to ooze foam.

8. **BEGIN THE FOAM INJECTION PROCESS** Insert the rubber nozzle tip fully into the bottom port. Begin injecting slowly, with very low pressure, allowing the expanding foam material to seep into every space and fissure within the crack. Be patient! The key to successful injection is allowing the polyurethane foam time to expand. Tiny, hairline cracks may require a few minutes, at each port, for total closure.

Keep applying the low pressure until polyurethane foam starts coming out of the next port up. Release the gun trigger. Quickly remove nozzle from the first port and insert a plug tightly into that port. Resume injecting the polyurethane foam into the second port, then plug that one when the next port up begins to ooze foam.

Repeat the procedure until you have injected material into every port.

TAKE YOUR TIME and give the foam time to expand.

NOTE: Allow 3 to 4 hours for the polyurethane foam to expand and cure.

9. **COMPLETE THE JOB** For a finished appearance, use a chisel and hammer to remove the ports and Surface Seal. The Surface Seal may also be left in place and painted - or you can grind it flush to the surface.

Place all items and waste in a trash bag and dispose of properly.

AquaBond® PF-37 Polyurethane Foam

HYDROPHOBIC POLYURETHANE FOAM

GENERAL DESCRIPTION:

Aquabond PF-37 is a hydrophobic single-component, VOC compliant polyurethane injection resin designed to repair leaking joints and cracks in concrete. The cured hydrophobic material exhibits the elasticity and durability to stop leaks permanently. After reacting to minimal amounts of water, the resulting foam will maintain its physical form and not be subject to shrinkage.

Aquabond PF-37 expands up to 25 times its initial volume and cures to tough, adhering foam capable of withstanding thermal cycles and crack movement.

ADVANTAGES:

- 100% solids.
- Expands up to 25 times initial volume
- Dispenses as a single component
- Controllable reaction times
- Outstanding adhesion
- Non-hazardous shipping
- Non-flammable
- Cures inert, non-toxic, permanent seal

Physical Properties – Liquid		
	Aquabond PF-37	Test Method
Viscosity	300 cps	ASTM D-1638
Specific Gravity	1.10	ASTM D-1475
Color	Light amber when liquid - cures to white color	
Flash Point	> 250 °F	ASTM D-92

----- Solid Cured -----		
Density	5 lbs/ft ³	ASTM D-1622
Elongation	140%	ASTM D-638
Tensile Strength	25 psi	ASTM D-638
Toxicity	Non-toxic	

WARRANTY

Recommendations concerning the performance or use of this product are based upon independent test reports believed to be reliable. If the product is proven to be defective, at the option of the Manufacturer, it will be either replaced or the purchase price refunded. The Manufacturer will not be liable in excess of the purchase price. The user will be responsible for deciding if the product is suitable for his application and will assume all risk associated with the use of the product.

This warranty is in lieu of any other warranty expressed or implied, including but not limited to an implied warranty of merchantability or an implied warranty of fitness for a particular use.

