

HI-TECH Systems

"HT-CIK"

CRACK INJECTION KIT

Product Description:

The *HT-CIK* Crack Injection Kit was designed for small scale repairs to cracked concrete and block. All that is needed is a standard 10 oz. caulking tool, everything else required is included in this kit. *HT-CIK* is a high strength two component 1:1 ratio adhesive binder with super low viscosity for deep penetration. It is an excellent adhesive for use in crack grouting by injection or gravity-feed.

Applications:

- ✓ Injection for cracks in concrete and block
- ✓ Gravity-feed of cracks in horizontal concrete
- ✓ Stops additional damage
- ✓ Used to "knit" cracked slabs

Advantages:

- ✓ Easy mix, convenient cartridge fits in any standard 10 oz. caulking tool
- ✓ Low viscosity
- ✓ Cures from -20° F to 130° F.
- ✓ Unique, high-strength, structural adhesive
- ✓ Deep penetrating and tenacious bonding of cracks in structural concrete
- ✓ Fast initial set; rapid gain to ultimate strengths
- ✓ Excellent chemical resistance

Physical Properties:

Viscosity (Mixed)	250 cps
Hardness, durometer (ASTM D2240)	67 to 72D
Tensile Strength, PSI (ASTM D412)	4600
Tear Strength (ASTM D624)	-lb/mil 489
Elongation % (ASTM D412)	6% to 8%
Compressive Strength (neat)	3900 psi
(ASTM C109) (with sand)	4800 psi
Bond Strength (ASTM 882-99)	3450

Kit Contents:

- 2 9.4oz. *HT-CIK* Cartridges
- 2 Injection nozzles with port connectors
- 2 Flexible extension hoses
- 2 Cups of *HT Capping Gel*
- 4 Disposable capping trowels
- 12 Injection ports w/caps
- 1 Port placement nail
- 1 Pair of disposable gloves

Approximate Coverage per Kit:

4" wall: 1/16" crack	11.25 lineal feet
6" wall: 1/16" crack	7.50 lineal feet
8" wall: 1/16" crack	5.60 lineal feet
4" wall: 1/8" crack	5.60 lineal feet
6" wall: 1/8" crack	3.75 lineal feet
8" wall: 1/8" crack	2.85 lineal feet

Additional cartridges and accessories are available as needed for more cracks than the approximate coverage listed above. Each additional cartridge would approximately fill ½ of what is listed above since there are two cartridges in a kit.

Preparation:

If the crack or surface is contaminated, they must be first cleaned of loose debris and contaminants such as dirt, salts, efflorescence, oil, loose materials, rubber, paint, grease, or other foreign material that would be detrimental to bond the *HT-CIK*. Do not use solvents and make sure the area is dry. Vacuum or blow off cement dust.

Port Placement:

Port spacing typically equals the thickness of the concrete ie; (4" spacing for 4" wall thickness), closer spacing for very fine cracks, or where more open spots occur. Ports are only placed on one side of the wall. If you cannot access the other side to seal it, reduce port placement by 20%. Mark the port locations, and adhere the ports with the capping gel and the port placement nail. To do this, mix equal small amounts of "A" and "B" sides of the Capping Gel together, butter the bottom of each port, center ports on cracks using the point of the nail through the port. Once placed, pull the nail out and visually ensure the crack has not been covered with the capping gel.

Crack Sealing:

Once all ports are glued to the wall, mix more Capping Gel and completely cover the base of each port and along the entire length of the crack – be sure there are no pinholes where the *HT-CIK* could leak. If the backside of the crack is visible, seal it as well. Let all of the capping gel completely dry before proceeding with injection (2-8 hours).

Injection - Walls:

First, become familiar with attaching and detaching the connector on the end of the hose to a port. Simply push the connector on to the port until you cannot pull it off. To pull it off, push the inner ring that seats on the port up into the connector body, then pull it off of the port.

Shake cartridge for 30 seconds, remove cap, add the flow restrictor on the top of the cartridge, then attach the mixing nozzle. Note: Be sure all connections are securely attached to one another. Put cartridge in caulking tool, and dispense a small amount into a cup to ensure the product is on ratio. Attach flexible hose to the nozzle, (the other end of the hose has the port connector). Attach port connector to the lowest port on the wall and dispense *HT-CIK*. Monitor all connections, ports, and wall for leaks. Once *HT-CIK* flows out of the port above it, stop dispensing, remove connector from the port, then cap the port. Continue in the same manner from port to port until finished. Allow for complete cure of injection material before any finishing work.

Gravity Feed - Floors:

Prep the cartridge exactly as stated above except there is no need for the flexible hose and connector. Dispense *HT-CIK* into vee-notched crack. Continue placement until completely filled. Seal underside of slab prior to filling if cracks reflect through.

Finishing:

Once the *HT-CIK* has cured, ports and Capping Gel can be removed for aesthetic purposes. Knock ports and most of the Capping Gel off with a hammer and flat chisel, along with any runs or spills. Finish by grinding flush to the surface.

Disposal And Clean Up:

Cured product may be disposed of without restrictions. Excess liquid 'A' and 'B' material should be mixed together and allowed to cure, then disposed of in the normal manner.

Shelf Life:

1 year in original unopened container.

Storage Conditions:

Store between 60°F - 85°F and keep out of direct sunlight.

Chemical Resistance:

Test Procedure; ASTM D-1308 @72°F

R=Recommend

RC=Recommend Conditional =some swelling or discoloration

N=Not Recommend

1=Some discoloration only

<u>Chemical</u>	<u>Result</u>
Acetic Acid 10 %	R
Acetone	RC
Battery Acid (Sulfuric Acid)	RC
Brake fluid	R
Chlorine (2,000 ppm in water)	R
Citric Acid	R
Gasoline	R
Hydraulic Oil	R-1
Methanol (5%) Gasoline	RC
Motor Oil	R-1
Toluene	RC
Vinegar	R
Water	R
Xylene	R

Safety:

MSDS will be mailed immediately upon receipt of a purchase order or upon request. All personnel should read and understand product Material Safety Data Sheets. Long sleeve overalls or disposable overalls, rubber gloves, splash shields, rubber or leather boots should be worn. Do use near high heat or open flame. Do not take internally. Keep out of the reach of children.

Warranty:

HI-TECH warrants its products to be free of manufacturing defects and that they will meet HI-TECH's current published physical properties when applied in accordance with HI-TECH's directions and tested in accordance with ASTM and HI-TECH's standards. There are no other warranties by HI-TECH of any nature whatsoever, expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. HI-TECH Corporation shall not be liable for damages of any sort, including remote or consequential damages, resulting from any claimed breach of any warranty, whether expressed or implied, including any warranty of merchantability or fitness for a particular purpose or from any other cause whatsoever.