

Advanced  
Construction  
Technologies



# Repair Cracks

## EPICOL INJ LV

Low-Viscosity Epoxy Injection Resin For Concrete

### Product Identifier

#### *Product Name*

EPICOL INJ LV

*EPICOL INJ LV is a low-viscosity epoxy resin for structural bonding of cracks and micro cracks in dry or wet concrete. Can be used as adhesive resin for bonding and anchoring.*

#### *Supplier Details*

Alchatek  
4508 Bibb Blvd  
Tucker, GA 30084  
T: (404) 618-0438

#### *Emergency Phone Numbers*

Call CHEMTREC  
Day or Night

1-800-424-9300  
+1 703-527-3887

### Description

EPICOL INJ LV is a low-viscosity epoxy resin for structural bonding of cracks and micro cracks in dry or wet concrete. Can be used as adhesive resin for bonding and anchoring.

### Uses

- Structural crack injection.
- Anchoring.
- Bonding agent.

### Advantages

- Low-viscosity.
- For dry and wet applications.
- Deep penetration in micro cracks.
- Solvent-free.
- Excellent adhesion to concrete.
- Long processing time.

### Application

Note: the following are a few typical application descriptions. In case of other jobsite parameters, please contact our technical department.

#### PRELIMINARY ANALYSIS

For structural repairs, always consult with a licensed structural engineer. Identify load-bearing elements and discuss all concrete repair needs with team of client, contractor, and engineer. For crack repair, clean or grind surface to expose full length of crack to accurately identify path and severity of damages.

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LOW-VISCOSITY EPOXY INJECTION RESIN  
FOR CONCRETE

## PREPARATION OF THE SUBSTRATE

Expose full length of crack to clean concrete. Remove all loose debris, existing coatings, and/or residual build-up such as calcification or efflorescence.

## PREPARATION OF THE PRODUCT

Mix each component well prior to installing. Achieve mix by shaking cans for 3 minutes. Apply product in minimum temperatures of 50° F (10° C).

## PREPARATION OF THE EQUIPMENT

Epicol INJ LV can be pumped with single component equipment. Take note of working time to prevent curing in pumps. Read pump manufacturer's instruction manual carefully prior to use.

## APPLICATION

- For Crack Injection:

Expose bare, full-length crack with grinder. Set surface ports at distances of 6" - 12" (15.24 - 30.48 cm), depending on crack width, with Alchatek NS950 epoxy paste. Surface seal the crack between ports. Be sure to leave open channel through the surface port to the bare crack.

Once NS950 is completely cured, connect pump hose to the surface port. Inject at low pressures (<400psi [ $<2757.90$  kPa]) to prevent blowing port off of the wall. Inject port until resin is observed coming out the next port. Then move to the next port, and cap the previous port. (Resin may be seen in the stem of the port. As the resin subsides, or is accepted in the substrate, go back and fill the port again. Final fill is achieved when cured epoxy resin remains in the stem of the ports).

After all ports are injected to refusal, allow for final cure. After final cure, remove all ports and surface seal with concrete grinder to flush finish.

- For Anchoring:

Epicol INJ LV is a self-leveling product. Only use in horizontal anchoring applications. Fill anchor hole completely with resin. Insert element to be anchored. Support anchored element to desired position until final cure. After final cure, spot-grind to final finish.

## REQUIRED TOOLS

Injection pump and grinder

## CLEANING AND MAINTENANCE

Flush pump per manufacturer's recommendations in accordance with epoxy resins. Grind substrate to final finish using dust-control vacuum for best results. Recap all unused and unmixed Epicol INJ LV until later use. Allow any mixed product to achieve final cure, and then discard per local government or job site regulations.

## COMPLIMENTARY PRODUCTS

Alchatek NS950

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## ADVICE / FOCAL POINTS

Structural epoxy resins are not designed for dynamic cracks. Cracks will reappear if movement persists. Epicol INJ LV must be applied in temperatures greater than 50° F (10° C). Consult structural engineer for final recommendations concerning structural load-bearing elements and anchoring applications.

## Technical Data

### PHYSICAL PROPERTIES:

#### Technical Specifications

Specific Mass	Approx. 68 lb/ft <sup>3</sup> (1.09 dm <sup>3</sup> )
Viscosity	85 cps (85 mPa.s)
Pressure Resistance	> 14503 psi (> 99994.66 kPa)
Tensile Strength	> 7251 psi (> 49993.89 kPa)
Bonding Strength	> 8702 psi (> 59998.18 kPa)
Elongation at Break	<2 %
Adhesion to Concrete	> 377 psi (> 2599.32 kPa)
Adhesion to Steel	>1740.45 psi (> 11999.98 kPa)
Pot life (100g)	Approx. 80min at 77°F (24.38m at 25°C)
Mixing Ratio	A:B 3.35:1 (by volume), 100:30 (by weight)
Min. Application Temperature	> 50°F (+ 10°C)
Hardening Temperature	> 41°F (+ 5°C)
Hardening Time at 68°F	Can be mechanically loaded 24 days Can be chemically loaded 7 days
Curing	Non-shrinking
Shelf Life	2 years

## Appearance

Initial Reaction Time	6 seconds
Tack Free	45 seconds
90% Full Strength	15 minutes

## Estimating Quantities

231 cubic inches / gallon (3.77 dm<sup>3</sup> / 3.79 liters).

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## Packaging

EPICOL INJ LV is supplied in 1 Gallon Units (2.5 kg Units).  
Mix A:B 3.35:1 (by volume).

## Storage and Shelf Life

Store in a dry, well ventilated storage area between 42°F (5.56°C) and 95°F (35°C).  
2 years shelf life.

## Safety Precautions

Avoid contact with eyes and skin, always use personal protective equipment in compliance with local regulations. Read the relevant Safety Data Sheet before use. Safety Data Sheets are available on [Alchatek.com](http://Alchatek.com). When in doubt contact Alchatek Technical Service.