

Crack Repair and Structural Epoxy Injection for Concrete



(800) 999-5099
strongtie.com

CI Family Crack Repair Structural Features and Benefits

You've got cracks. We've got you covered with a complete line of structural epoxy repair products.

From viscosity to cure time, to pot life, to temperature, to class — the Simpson Strong-Tie family of crack repair products offer a solution for almost every job. And we've got the dispensing tools and injection systems that help make application fast, easy and clean. Our CI family of epoxies are tested to the latest standards and meet ASTM C-881 Class IV for bonding hard-to-hard concrete in load-bearing applications. You can be sure that repairs are strong, and that your structures are safer.



The right size at the right time

For small to medium-size jobs, Simpson has all Crack Injection formulations available in a 1-quart cartridge delivery system. These cartridges can be dispensed through a manual or pneumatic dispensing tool. The pneumatic tool is a good solution to prevent fatigue on higher volume cracks.

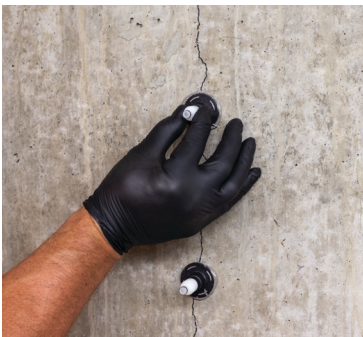
For medium to large jobs, material cost can be reduced through buying in bulk. The 3-gallon bulk kits can be dispensed through metered bulk injection equipment supplied by others.



EIP-EZA
E-Z-Click
flush-mount
injection port



EIPX-EZ
E-Z-Click drilled-in/
corner-mount
injection port



Crack injection system

For the pressure injection repair of cracks, the E-Z-Click™ injection system is comprised of a specially designed fitting and ports that take the mess out of your repair project while allowing you to work faster. The E-Z-Click injection fitting installs onto the end of the Optimix® mixing nozzle and clicks onto the E-Z-Click ports during injection. This positive connection eliminates messy leakage, minimizing waste and clean up. The E-Z-Click ports open and close with a simple push or pull of the head of the injection port. The ports are available in both flush-mount and corner-mount/drill-in configurations.



EMNO22
Optimix mixing
nozzle



EIF-EZ
E-Z-Click
injection fitting



Paste-overs

Simpson has three paste-over formulations available.

CI-PO™ is a fast cure, 2:1 paste-over epoxy available in a 32-oz. cartridge or in a 3-gallon kit. CI-PO is a rigid paste-over that can be left in place after injection or removed by grinding or chipping.

Our ETR formulation is available in a 16-oz. kit — (2) 8-oz. jars for small repair jobs or for use as a dedicated epoxy for securing injection ports. It is a fast cure 1:1 ratio epoxy.

CIP-F is a flexible and peelable, fast-set polyuria paste-over material available in a 22-oz. cartridge. This material can be peeled away from the surface, preventing surface damage from port removal.



CI-PO Crack Injection Paste-Over



ETR
Paste-over epoxy



CIP-F
Flexible paste-over
adhesive

Technical Information



CI-LV™

Hi-Modulus, Low Viscosity

- All-around versatility; low and high temperatures
- Optimal viscosity for a high percentage of jobs
- Underwater pressure injection
- NSF/ANSI 61 approval

Viscosity

50°F (10°C) = 1,500 cP
72°F (22°C) = 350 cP

Crack Width

0.002–0.25 (0.05 mm–6 mm)

Usage Temperature

40°F (4°C)–90°F (32°C)

Gel Time (60 gram mass)

50°F (10°C) = 400 minutes;
72°F (22°C) = 45 minutes

Cure Time

72°F (22°C) = 6¼ hours

ASTM C881

Type I / II; Grade 1; Class B
Type I / IV and II / V; Grade 1; Class C



CI-LV FS

Hi-Modulus, Low Viscosity, Fast Set

- Fast setting in warmer temperatures
- Underwater pressure injection
- Ideal for cold-weather repairs (40-60 F)

Viscosity

50°F (10°C) = 2,000 cP
72°F (22°C) = 600 cP

Crack Width

0.016–0.25 (0.4 mm–6 mm)

Usage Temperature

40°F (4°C)–90°F (32°C)

Gel Time (60 gram mass)

50°F (10°C) = 55 minutes;
72°F (22°C) = 12 minutes

Cure Time

72°F (22°C) = 4 hours

ASTM C881

Type I / II; Grade 1; Class B
Type I / IV and II / V; Grade 1; Class C



CI-GV™

Hi-Modulus, Gel Viscosity

- Non-sag gel
- Larger cracks
- Pick-proof sealant
- Underwater pressure injection

Viscosity

50°F (10°C) = Non-Sag
72°F (22°C) = Non-Sag

Crack Width

0.094–0.25 (2.4 mm–6 mm)

Usage Temperature

40°F (4°C)–90°F (32°C)

Gel Time (60 gram mass)

50°F (10°C) = 200 minutes;
72°F (22°C) = 30 minutes

Cure Time

72°F (22°C) = 6 hours

ASTM C881

Type I / II; Grade 3; Class B
Type I / IV and II / V; Grade 3; Class C



CI-SLV™

Hi-Modulus, Super-Low Viscosity

- Gravity feed
- Ultra-fine cracks
- Broadcast or flood coat
- Underwater pressure injection

Viscosity

72°F (22°C) = 150 cP
90°F (32°C) = 85 cP

Crack Width

0.002–0.25 (0.05 mm–6 mm)

Usage Temperature

60°F (16°C)–90°F (32°C)

Gel Time (60 gram mass)

72°F (22°C) = 40 minutes

Cure Time

72°F (22°C) = 9 hours

ASTM C881

Type I / IV; Grade 1; Class C



CI-LPL™

Hi-Modulus, Long Pot Life, Low/Medium Viscosity

- Bulk injection
- Long working times at higher temps (up to 110° F/43°C)
- Medium viscosity at lower temperatures
- Underwater pressure injection

Viscosity

72°F (22°C) = 2,000 cP
90°F (32°C) = 750 cP

Crack Width

0.016–0.25 (0.4 mm–6 mm)

Usage Temperature

60°F (16°C)–110°F (43°C)

Gel Time (60 gram mass)

60°F (10°C) = 420 minutes;
72°F (22°C) = 135 minutes; 95°F (35°C) = 40 minutes

Cure Time

95°F (35°C) = 4 hours

ASTM C881

Type I / IV; Grade 2; Class C

Packaging Information

Model No.	Option	Packaging Qty.	Carton Qty.	Compatible Tools and Cartridges
Epoxy Formulations				
CIGV32	CI-GV™ Gel-Viscosity Cartridge System, 32 oz. (946 mL)	1	5	ADT30S, ADTA30P (EMNO22 mixing nozzle included)
CIGV3KT	CI-GV Gel-Viscosity 3-Gallon (11.4 L) Bulk Kit Kit Contains (2) CIGV1A & (1) CIGV1B	1	—	Metering pumps offered by third-party manufacturers
CILV32	CI-LV™ Low-Viscosity Cartridge System, 32 oz. (946 mL)	1	5	ADT30S, ADTA30P (EMNO22 mixing nozzle included)
CILV3KT	CI-LV Low-Viscosity 3-Gallon (11.4 L) Bulk Kit Kit Contains (2) CILV1A & (1) CILV1B	1	—	Metering pumps offered by third-party manufacturers
CILVFS32	CI-LV FS Low-Viscosity Cartridge System, 32 oz. (946 mL)	1	5	ADT30S, ADTA30P (EMNO22 mixing nozzle included)
CILVFS3KT	CI-LV FS Low-Viscosity 3-Gallon (11.4 L) Bulk Kit Kit Contains (2) CILV1A & (1) CILVFS1B	1	—	Metering pumps offered by third-party manufacturers
CILPL32	CI-LPL™ Long-Pot-Life Cartridge System, 32 oz. (946 mL)	1	5	ADT30S, ADTA30P (EMNO22 mixing nozzle included)
CILPL3KT	CI-LV Long-Pot-Life 3-Gallon (11.4 L) Bulk Kit Kit Contains (2) CILPL1A & (1) CILPL1B	1	—	Metering pumps offered by third-party manufacturers
CISLV32	CI-SLV™ Super-Low-Viscosity Cartridge System, 32 oz. (946 mL)	1	5	ADT30S, ADTA30P (EMNO22 mixing nozzle included)
CISLV3KT	CI-SLV Super-Low-Viscosity 3-Gallon (11.4 L) Bulk Kit Kit Contains (2) CISLV1A & (1) CISLV1B	1	—	Metering pumps offered by third-party manufacturers
Paste Over				
ETR16	ETR Kit Containing (1) 8-oz. Canister of Resin and (1) 8-oz. Canister of Hardener	1	4	Manual mixing
CIP032	Crack Injection Paste-Over Cartridge, 32 oz. (946mL)	1	5	ADT30S, ADTA30P (AMN19Q mixing nozzle included)
CIP03KT	Crack Injection Paste-Over 3-Gallon Bulk Kit Kit Contains (2) CIP01A and (1) CIP01B	1	—	Manual mixing
CIPF22	Flexible/Peelable Crack-Injection Paste-Over Cartridge, 22 oz. (650 mL)	1	10	EDT22S, EDTA22CKT (EMNCIPF22 mixing nozzle included)
Dispensing Tools				
ADT30S	Manual Tool for 30-oz. and 32-oz. Cartridges	1	5	CIGV32, CILV32, CILVFS32, CILPL32, CIP032, CISLV32
ADTA30P	Pneumatic Tool for 30-oz. and 32-oz. Cartridges	1	—	CIGV32, CILV32, CILVFS32, CILPL32, CIP032, CISLV32
EDT22S	EDT22S Manual Tool for 22-oz. Cartridges	1	5	CIPLO22, CIPF22
Mixing Nozzles				
EMNO22-RP6	Optimix™ Mixing Nozzle, 6-pack	6	5 packs	CIGV32, CILV32, CILVFS32, CILPL32, CISLV32
AMN19Q-RP5	Mixing Nozzle, 5-pack	5	10 packs	CIP032
EMNCIPF22-RP5	Mixing Nozzle, 5-pack	5	5 packs	CIPF22
E-Z-Click™ Injection Fitting and Ports				
EIF-EZ	E-Z-Click Injection Fitting	1	10	—
EIP-EZA	E-Z-Click Flush-Mount Injection Port	1	100	—
EIP-EZAKT	20 E-Z-Click Flush-Mount Injection Ports and 1 E-Z-Click Injection Fitting	1 kit	5 kits	—
EIPX-EZ-RP20	20 E-Z-Click Corner-Mount/Drilled-In Injection Ports	20	5 packs	—
EIPX-EZKT	20 E-Z-Click Corner-Mount/Drilled-In Injection Ports and 1 E-Z-Click Injection Fitting	1 kit	5 kits	—

For more information regarding specific products suitable to your unique situation or condition, please visit strongtie.com/crackrepair or call your local specialist at **(800) 999-5099**.