LOW VISCOSITY CONCRETE CRACK INJECTION EPOXY

EPAR 226LV CI

TECHNICAL DATA

1.0 DESCRIPTION

EPAR 226LV CI is a low viscosity, unfilled solvent-free epoxy with excellent mechanical properties. EPAR 226LV CI is used as a crack injection epoxy for concrete repairs.

2.0 PHYSICAL PROPERTIES:

2.1	Viscosity (mixed)		Typically 375 – 470 centipoise (cps) at 20°C
2.2	Mix Ratio		Three parts resin: 1 part hardener by volume.
2.3	Pot Life		20 – 30 minutes at 20°C.
2.4	Minimum Application Temp.		10°C.
2.5	Shelf Life		1 year in original unopened containers.
2.6	Cured Properties		(Unfilled at 20°C)
	2.6.1	Colour	Transparent
	2.6.2	Specific Gravity	1.1
	2.6.3	Compressive Strength	55 MPa 2 days, 87 MPa 7 days.
	2.6.4	Compressive Modulus	2 GPa.
	2.6.5	Tensile Strength	24 MPa.
	2.6.6	Thermal Expansion	5x 10^{-5}mm/mm/°C.

3.0 USES

EPAR 226LV CI is used to repair cracks in concrete by injection or gravity feed.

4.0 APPLICATION INSTRUCTIONS

4.1 For detailed instructions for epoxy crack injection, please refer to the appropriate crack injection guides and the crack injection equipment handbook/manual. These instructions are of a general nature only.

4.2 SURFACE PREPARATION. Thoroughly clean the crack and surrounding surfaces of all extraneous matter, especially oil and grease. Laitance and any coatings surrounding the crack should be removed from concrete surfaces mechanically as these will prevent proper bonding of the crack sealing epoxy. If necessary, clean surrounding concrete by high-pressure water blasting or steam cleaning. All surfaces should be dry after cleaning operations. Vacuum or blow dust away with oil-free compressed air; carefully blow out the crack. If the crack is wet or seeping water, then this water must be stopped before proceeding with the crack repair.

4.3 MIXING. Manual: Accurately proportion required volume of resin and hardener ensuring this amount can be used within its pot life. Mix thoroughly preferably using a paint stirrer fitted to a low speed electric drill. During the mixing process scrape the bottom and sides of the container at least once with a spatula or similar tool to ensure all components are incorporated. Mixing should continue for approximately 5 minutes. Take care to avoid air entrapment.
Machine: Set up per manufacturer's manual.

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Products for Concrete and Construction

EPAR 226LV CI

TECHNICAL DATA Continued

5.0 APPLICATION INSTRUCTIONS (continued)

Depending on requirements and application, EPAR 226LV CI may be injected into the concrete using a variety of methods:

5.1 Machine (vertical and horizontal cracks)

Set the resin: hardener ratio to 3 parts resin to 1 part hardener. Follow machine manufacturer instructions for application.

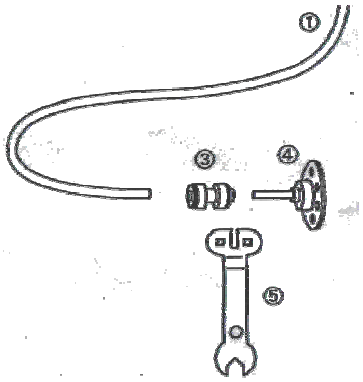
5.2 Gravity Feed (horizontal cracks)

Pour the epoxy into a suitable container for application. An empty mastic cartridge is suitable for gravity feed. Cut the end off the cartridge, screw on the nozzle and pour the epoxy into the cartridge. Cut the nozzle to match the crack width. For very small cracks, use a syringe or small bottle with nozzle cap.

Place the tip of the cartridge or nozzle at the start of the crack and allow the EPAR 226LV CI to flow into the crack. As the epoxy fills the crack, move the nozzle along the crack. Repeat if necessary to completely fill the crack.

For larger cracks, insert a bung into the cartridge and use an ordinary mastic gun to apply the epoxy into the crack.

5.3 Cartridge Injection (vertical and horizontal cracks)



5.3.1 Prepare the crack by blowing out any loose dust.

5.3.2 Affix flanges ④ along the length of the crack to be sealed using either EPAR FAIRFILL (allow 2 hours for FAIRFILL to harden) or other EPAR sealing epoxy. Depending on the depth of the crack, space the flanges at 15 – 30cm intervals (the deeper the crack, the closer the flange spacing). Ensure that the sealing material extends through the holes of the flange as well as 3 – 5mm around the circumference of the base of the flange.

5.3.3 Seal the top of the crack between the flanges using EPAR FAIRFILL or equivalent. Ensure that all the flanges are open by pushing the stem of the flange down towards the base.

5.3.4 Prepare an empty mastic cartridge by cutting the end of the cartridge and attaching a nozzle (cut the tip of the nozzle about 5mm down from the top). Attach the mixing hose ① to the nozzle (force it on – it may require softening in hot water).

5.3.5 Attach an adaptor ③ to the end of the hose and fill the cartridge with the mixed epoxy to about ¾ full. Insert a bung into the end of the cartridge. Insert cartridge into mastic gun.

5.3.6 For vertical cracks, start at the lowest flange and work your way up. For horizontal cracks, start at one end of the crack and work along. Attach the adaptor to the first flange. This opens the flange so that the epoxy can pass through the flange into the crack. Apply pressure to the mastic gun and inject the epoxy into the crack. If using a pneumatic dispensing tool, set the tool at a low setting when beginning injection and increase pressure if necessary to get the epoxy to flow. Once the EPAR 226LV CI appears at the next flange, pull the adaptor away from the flange. This locks the flange, stopping the flow of epoxy. If required, use the adaptor tool ⑤ to disconnect the adaptor from the flange. For narrow cracks it may be necessary to gradually increase the pressure until the epoxy begins to flow. It may take a few minutes for the epoxy to fill the crack and travel to the next port, especially for deeper cracks.

5.3.7 Repeat step 5.3.6 for the remaining flanges.

5.3.8 Leave the EPAR 226LV CI epoxy to set (at least 8 hours), and then grind off the flanges and EPAR FAIRFILL to leave a smooth, sealed crack.

5.3.9 The above steps may be utilised for machine injection of EPAR 226LV CI, but follow specific manufacturer application instructions in all cases.

6.0 PACKAGING

1 litre, 4 litre, 20 litre and 80 litre packs.