

Sika Crack Injection System

Construction

Description	The Sika Crack Injection System involves a number of materials combined to seal and repair 0.2 mm to 5.0 mm cracks in concrete structures.
Uses	The Sika Crack Injection System can be applied: <ul style="list-style-type: none"> • In structural and non-structural bonding situations. • On concrete and masonry surfaces that have cracked. • To cracks between 0.2 mm wide and 5.0 mm wide. • For vertical, horizontal and overhead cracks.
Advantages	Refer page 3
Materials Required	The Sika Crack Injection System requires the following materials: <ul style="list-style-type: none"> • Sikadur-52 epoxy resin (450 ml twin cartridge) • Twin cartridge application gun • Static mixers and hoses • Injection flanges and connectors • Sikadur-31 adhesive mortar OR Sika AnchorFix-1 rapid set polyester
Packaging	Sikadur-52 : 450 ml twin cartridge Sikadur-31 : 5 kg kit Sika AnchorFix-1 : 300ml single cartridge Static mixers, hoses, injection flanges and connectors available as required

System



5 simple steps to crack injection:

1. Identification of the cracks to be filled
2. Apply flanges using the Sika adhesive and seal crack surface with Sikadur-31 or Sika Anchorfix-1
3. Application of Sikadur-52 until flooding occurs
4. Cured Sikadur-52 and Sika adhesive ground back
5. Application of a final Sika coating

Application

The Sika Crack Injection System can be applied simply using the following steps:

- Clean the designated cracks using oil free compressed air or a wire brush depending on the extent of the job.
- Fix injection flanges over the centre of the crack width, at a minimum of 300 mm centres, to a maximum of 500 mm.
- Use Sikadur-31 epoxy adhesive or Sika AnchorFix-1 to place the injection flanges (Picture i).
- Seal the surface of the crack between the flanges using the same material.
- Commence injection under pressure from one end of the crack (this would be the lowest flange on vertical cracks) until the Sikadur-52 exudes from the next flange (Picture ii).
- Seal off the first flange and proceed to inject from the second flange. Follow this procedure for the remainder of the crack.
- Once the crack is filled and the Sikadur-52 is fully cured, remove the flanges and grind back the excess adhesive mortar and resin.

Cleaning

Uncured material can be cleaned from tools using Sika Colma Cleaner. Cured material can only be removed mechanically.

Important Notes

- Make sure that approximately 5 to 15 ml of Sikadur-52 is pumped through the static nozzle before application begins. This will ensure that the material has been properly mixed before injection.

Specification**Crack Injection**

- i. Cracks designated by the supervising officer to be injected should be blown out with oil free compressed air, or cleaned completely using a wire brush.
- ii. Fix flanges to the surface of the crack using Sikadur-31 adhesive/Sika AnchorFix-1 adhesive. Fill the surface crack with the same material, and allow to fully cure.
- iii. Commencing from the lowest flange, inject Sikadur-52 until the resin is seen to flow from the next flange up. Seal off the first flange and inject from the second flange. Proceed accordingly until all flanges are sealed off.
- iv. Allow the Sikadur-52 to fully cure and remove the flanges. The surface should be ground back prior to the application of the overall levelling mortar and the coating system.

Notes for Guidance

- Crack injection should only be used where there is no likelihood of further movement around the crack and where directed by the Supervising Officer.
- The location of the flanges is dictated by the width and depth of crack and is best determined through trials.

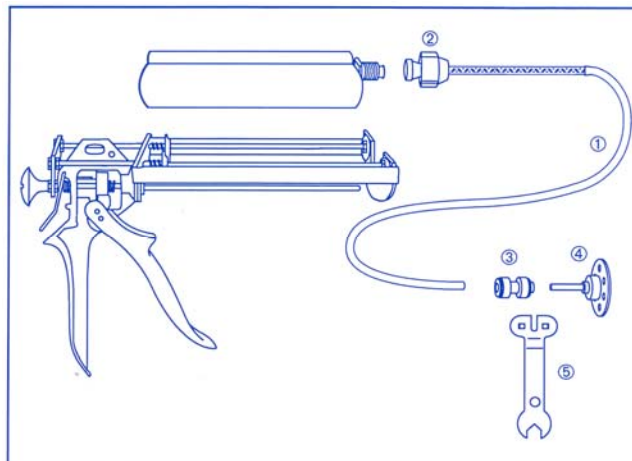
General

- All material shall be applied strictly in accordance with the Technical Data Sheets of the manufacturer, Sika Australia Pty. Ltd. Where this specification is at variance to the published data of the manufacturer, this shall be referred to the company and the Supervising Officer prior to works commencing.

Handling Precautions

- Sika products are generally quite harmless, provided normal precautions are taken when handling chemicals. Avoid contact with foodstuffs and utensils. Avoid prolonged skin contact. Wear protective clothing, gloves, goggles etc. In the event of contamination wash thoroughly with water. If the eyes or mouth are affected wash with clean water and obtain medical attention immediately.
- Avoid all sources of ignition. No smoking.
- For further information refer to the Sika Material Safety Data Sheet which is available on request.
- If in doubt always follow the directions given on the pack or label.

1. **TOO-MIX-HSE** - 6.25mm (1/4") diameter, 32 Element Static Mixer with hose
2. **DUR-52NTC-450** - 150:300 ml (450ml) Twin Cartridges and Retaining Nut. The cartridges are used to house the injection materials in their respective mix ratios
3. **GUP-427** - Adaptor/Connector for Retaining Nut (hose to flange)
4. **GUP-418** - Crack Injection Flange/Nipple (see below for features)
5. Flange Tool - Not supplied and is not essential



GUN-52N - Hand Operated Bi-mixer for 150:300ml (450ml) Ratio-Pak Cartridges



25:1 trigger ratio

Dispenses most hard or difficult two component sealants, caulks and adhesives due to its high mechanical advantage

Thick patented catchplate, hardened push rod and robust construction, ensures reliability and increased working life

Net weight 1830g (1700g).

Features of the Crack Injection Flange/Nipple

1. Integral **self locating pin** for fast sitting over the crack.
2. A **roughened base** with **holes** to increase adhesion to the substrate.
3. A **ridge on the base** to reduce the likelihood of surface sealing material entering and blocking up the hole through which the injection material passes.
4. A **safety on/off valve** which can be operated simply by pushing or pulling the flange stem.
5. Quick connection and removal of the hose from the flange using an **adaptor/connector**.
6. No drilling is required. The flange can be adhered directly to the substrate.

