Construction

Sikadur® Injectokit-TH

Pre-packaged thixotropic epoxy crack injection system

Positioning Description
The Sikadur® Injectokit-TH system consists of a thixotropic two part epoxy crack injection resin contained in a patented single cartridge, complete with injection nipples, hoses, air release pins, and stirring rods. The kit is designed for those contracts where a complete injection system is required.

Use
For injecting cracks in concrete and masonry wherever there is a need to consolidate a structure or exclude water and air from contact with reinforcement. Due to its thixotropic nature it can be injected into open ended cracks where depth and quantity of resin need to be controlled. Crack widths from 0.2 - 2 mm can be filled. Ideal for small scale repairs on site. Can be used for insitu or precast concrete elements.

Advantages
- Convenient to use, disposable single cartridge contains both resin and hardener.
- Thixotropic, can be injected into fine cracks where access to all sides for sealing is not available.
- High strength, excellent bond to concrete, brickwork and masonry, either wet or dry.
- Modular nature, effective and economical use even for the smallest repair.

Product Data

Form
Thixotropic two part crack injection resin

Storage & Shelf Life
Shelf life 12 months when stored in original containers at 10℃ – 40℃ in dry conditions.

Packaging
The following Sikadur Injectokit-TH components are sold as separate items:
- 0.25 litre cartridges
- Injection nipples
- Sikadur Injectokit-TH hoses
- Air release pins
- Stirring rods

Technical Data

	10℃	20℃	30℃	40℃
Usable Life (minutes)	100	50	25	15
Viscosity (mPas)	400-800	250-500	100-250	-
Set time (hours)	12	7	5	3

Compressive strength	>70 N/mm^2 (BS6319)	(After 7 days curing at 20℃)
Flexural strength	>45 N/mm^2 (ISO R178)	(After 7 days curing at 20℃)
Tensile strength	>55 N/mm^2 (ISO527)	(After 7 days curing at 20℃)
Modulus of elasticity	Approx. 2,800 N/mm^2	
Elongation at break	2.5%	
Tensile bond strength	When tested to BS3900 Pt E10 in both dry and wet states is greater than normal concrete.	

Application Conditions

Surface preparation
- The surface sealant needs to retain the injection system under pressure.
- Care must be taken to provide a bond surface which is clean, dry, sound and free from contamination by oil or grease.

Surface sealant
- 5 Minute Epoxy should be used where preparation and injection need to be completed in a short space of time.
- Where it is desirable or acceptable to inject the crack at least 24 hours after preparation, Sikadur UA CONCRETE FIX can be used as a surface sealant.

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Application of the surface sealant

- Immediately after mixing, apply a small amount of compound to the back of each nipple making sure that the valve will not be blocked, and place the nipple over the crack.
- The valve (centre) should be placed over the crack.
- Nipples should be placed between 200 mm and 500 mm apart dependent on crack size.
- Additional sealant should be applied onto the flange of the nipple to ensure a resin tight seal to the substrate.
- Surface sealant should be knifed into the crack between nipples to ensure a resin tight seal.
- Where cracks can be sealed on one side only, nipples should be placed at centres which are 80% of the depth to which the resin is required to penetrate.
- Application of the injection system may be commenced as soon as the epoxy has fully hardened. (5 Minute Epoxy: 5 minutes at 20℃).

Injection of the Sikadur Injectokit-TH epoxy resin

- Cut the top off the conical nozzle.
- Insert T-shaped rod and turn clockwise to engage stirring head in cartridge.
- Push rod down the full length of the cartridge to break the membrane separating the resin and hardener.
- Pump up and down 30 to 40 times to mix resin and hardener.
- Turn the T-shaped rod anticlockwise to disengage and then remove.
- Do not shake.
- Unscrew the conical nozzle and discard.
- Use the mixed material within the usable life.
- Screw the Sikadur Injectokit-TH hose onto the cartridge.
- Ensure the rubber 'O' ring is in place on the cartridge.
- Do not over tighten the fitting as this may distort the 'O' ring.
- Place cartridge into a standard gun.
- Push the free end of the Sikadur Injectokit-TH hose onto the nipple positione over the widest point of the crack and tighten down the locking cap.
- Do not over tighten.
- Insert an air release pin into the nipple adjacent to the injection point.
- Note: Do not start pumping until the air release pin is inserted to release the non return valve and release trapped air.
- Commence pumping slowly, do not use excessive pressure.
- The rate of acceptance on fine cracks may be very slow.
- When resin appears at the nipple next to the injection point:
  (a) Stop pumping.
  (b) Release the pressure on the injection gun.
  (c) Remove the air release pin.
  (d) Unscrew the cap and with a twisting movement pull off the Sikadur Inject TH hose.
- Attach the Sikadur Injectokit-TH hose to the next nipple.
- Insert air release pin in nipple beyond and recommence pumping.
- Repeat the process until the entire length of crack has been injected.
- On completion of pumping, the last cartridge can be left connected and pressurised slightly to allow for possible seepage into deep-seated cracks.

Making good

- After the Sikadur® Injectokit-TH injection resin has set, remove the nipples.
- These can be knocked off with a hammer.
- Fill any holes or voids with the selected surface sealant.
- The existing surface sealant can then be removed by either grinding or heating with a hot air gun and scraping the surface until the original substrate profile is restored.

Cleaning

Tools and application equipment should be cleaned using Sika Thinner C.

Important Notes

Limitations

Sikadur® Injectokit-TH should not be used for cracks where movement is expected to continue.

Notes

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Local Restrictions

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

Health & Safety Instructions

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Protective Measures

- To avoid rare allergic reactions, we recommend the use of protective gloves. Change soiled work clothes and wash hands before breaks and after finishing work.
- Local regulations as well as health and safety advice on packaging labels must be observed.
- 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.

Important Notes

- Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.
- Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.

Legal Notes

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the product when properly stored, handled and applied under normal conditions in accordances with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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