

# Sikadur® Crack Weld

## Crack Injection Kit

<b>Description</b>	Two component, low viscosity, fast curing epoxy sealing system for repairs to cracks in concrete and solid masonry. Conforms to ASTM C-881.
<b>Where to Use</b>	<ul style="list-style-type: none"> <li>■ Low pressure injection of cracks in structural concrete and solid masonry.</li> <li>■ Gravity feed cracks in horizontal concrete and horizontal solid masonry.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ As strong as concrete.</li> <li>■ Convenient mix in the nozzle cartridge system.</li> <li>■ Cartridges fit standard caulking guns.</li> </ul>
<b>Coverage</b>	Capseal will yield Approx. 300 mL Injection resins will yield Approx. 250 mL (See Charts for specific coverage rates)
<b>Packaging</b>	<ul style="list-style-type: none"> <li>■ Capseal (x2) 300 ml</li> <li>■ Injection Resin (x2) 250 ml</li> <li>■ Capseal mixer nozzle (x2)</li> <li>■ Capseal applicator fan (x2)</li> <li>■ Cartridge Flow Restrictor (x1)</li> <li>■ Injection resin mixers with extended tube (x2)</li> <li>■ Push fit connector (x1)</li> <li>■ Injection Ports (x16)</li> <li>■ Pair of Gloves (x2)</li> <li>■ Wooden Applicator (Tongue Depressor) (x2)</li> <li>■ Instructional DVD (x1)</li> </ul>

### How to Use

#### Surface Preparation

Substrate Preparation - For a successful application, very thorough preparation is a must. The crack to be treated must be dry and free from oil, grease, dust and other contaminants. Any loose material must be blown or brushed clear.

For Vertical Cracks (walls, columns, beams) - The surface of the crack should be sealed with the fast setting Sikadur Capseal supplied. The Capseal should also be used to affix the injection ports. The distance between the injection ports should be greater than the estimated depth of the crack (typically 1.5 times. If depth is not known, consult technical services).

For Horizontal Cracks (floors, slabs, etc.) - The Sikadur Capseal and injection ports may not be required as the resin may be introduced into the crack by gravity.

#### Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

**Shelf Life** 18 months in original, unopened containers.

**Storage Conditions** Store dry at 40° -75° F (5° -24° C)

**Product Conditioning** Condition dry at 40° -75° F (5° -24° C)

#### For Sikadur Injection Resin:

Compressive Strength (ASTM D-695), psi MPa	40° F	68° F	95° F
4 hours	-	-	500 (3.4)
8 hours	-	-	2000 (13.7)
16 hours	-	2000 (13.7)	3500 (24.1)
1 day	-	3000 (20.7)	5000 (34.5)
3 days	1500 (10.3)	8500 (58.6)	5500 (37.9)
7 days	6500 (44.8)	9000 (62.1)	7000 (48.3)
14 days	7500 (51.7)	9500 (65.5)	7500 (57.7)
28 days	9000 (62.1)	10,000 (68.9)	10,000 (68.9)

**Compressive Modulus (ASTM D-695)** 200,000 psi

**Viscosity Mixed (ASTM D-2393)** 500 cps

**Pot Life (ASTM C-881)** 25-30 min. (60g mass)

**Tensile Strength (ASTM D-638)** 6000 psi

**Elongation at Break (ASTM D-638)** 25 %

**Tensile Modulus (ASTM D-638)** 250,000 psi

**Flexural Strength (ASTM D-732)** 10,000 psi

#### Bond Strength (ASTM D-897)

2 day 350 psi (concrete failure)

14 days 450 psi (concrete failure)

**Water Absorption (ASTM D-570)** 0.24%

**Heat Deflection Temp. (ASTM D-648)** 109.7° F

**VOC:** Capseal: 30 g/L

Inj. Resin: 5 g/L

Construction



**For Sikadur Capseal:**

Temp. (F)	Gel Time (min)	Ready for Injection (min)
40	18	145
50	10	85
68	6	50
77	5	40
86	4	35

**Coverage Rates:**

Consumption of Crack Injection Resin in a crack					
	Length (in)	Width (in)	Depth (in)	Cu. Inches	# of Tubes
1/16" wide crack - 1" deep and 10 ft. Long	120	0.062	1	7.44	0.4
1/16" wide crack - 1.5" deep and 10 ft. Long	120	0.062	1.5	11.16	0.6
1/16" wide crack - 2" deep and 10 ft. Long	120	0.062	2	14.88	0.8
1/8" wide crack - 1" deep and 10 ft. Long	120	0.125	1	15	0.8
1/8" wide crack - 1.5" deep and 10 ft. Long	120	0.125	1.5	22.5	1.2
1/8" wide crack - 2" deep and 10 ft. Long	120	0.125	2	30	1.6
1/4" wide crack - 1" deep and 10 ft. Long	120	0.25	1	30	1.6
1/4" wide crack - 1.5" deep and 10 ft. Long	120	0.25	1.5	45	2.4
1/4" wide crack - 2" deep and 10 ft. Long	120	0.25	2	60	3.2

Consumption of Crack Injection Paste on a crack					
	Length (in)	Width (in)	Depth (in)	Cu. Inches	# of Tubes
1" Wide Strip - 10 ft. Long and 1/8" thick	120	1	0.125	15	0.8
1" Wide Strip - 10 ft. Long and 1/4" thick	120	1	0.25	30	1.6
1.5" Wide Strip - 10 ft. Long and 1/8" thick	120	1.5	0.125	22.5	1.2
1.5" Wide Strip - 10 ft. Long and 1/4" thick	120	1.5	0.25	45	2.4
2.0" Wide Strip - 10 ft. Long and 1/8" thick	120	2	0.125	30	1.6
2.0" Wide Strip - 10 ft. Long and 1/4" thick	120	2	0.25	60	3.2

**Mixing**

**Cartridge Set Up:**

Sikadur Capseal - Open screw cap, cut film to remove metal clip and attach nozzle, extrude waste until a uniform color is achieved.

Sikadur Injection Resin - Remove screw cap, insert outlet plugs, attach mixer nozzle with extension tube\*. Extrude waste to form a homogeneous mix. Use the push fit connector to connect to injection port.

\*For horizontal cracks (floor, slab, etc.), remove the extension tube.

**Application**

For Vertical Cracks (walls, columns, beams) - The resin should be injected into the first (lower) port. When the resin begins to flow from the adjacent port, close off the first port and disconnect the hose. Reconnect to the second port and inject until resin starts to flow from the third; this process is repeated until the whole crack has been injected. After the resin has been allowed to cure, the injection ports and capseal should be removed and any holes or voids should be filled.

For Horizontal cracks (floors, slabs, etc.) - To gravity feed cracks, seal the underside of the substrate prior to filling if the crack reflects through. Dispense the injection resin slowly into the vee-notched crack. Continue injecting until completely filled.

**Removal**

After the resin has been allowed to cure, the injection ports and capseal should be mechanically removed and any holes or voids should be filled.

**Limitations**

- Minimum substrate and ambient temperature 40°F (5°C). Maximum substrate temperature 95° F (45°).
- Minimum age of concrete must be 21-28 days, depending on curing and drying conditions.
- Do not apply over wet, glistening surfaces.
- Not for injection of cracks subjected to osmotic or hydrostatic pressure during application.
- Do not inject cracks greater than 1/4 in (6mm). Consult Sika Technical Services.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.
- **NOT FOR USE AS AN ANCHORING ADHESIVE.**



**Caution**

**CARTRIDGE No. 1 =>SIKADUR CAPSEAL (A+B)**

**PART A: WARNING: COMBUSTIBLE, IRRITANT.** Contains 1-ethenyl-3-methylbenzene (CAS: 100-80-1) and titanium dioxide (CAS: 13463-67-7). Keep away from heat, sparks, electrical equipment, and open flame. **DO NOT SMOKE.** Use only in well ventilated areas. May cause skin/eye/respiratory tract irritation. May be harmful if inhaled in high concentrations. May cause gastrointestinal disturbance. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. **Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.**

**WARNING!** This product contains a chemical known in the State of California to cause cancer.

**PART B: WARNING: ORGANIC PEROXIDE, IRRITANT, SENSITIZER.** Contains dibenzoyl peroxide (CAS: 94-36-0). Keep away from heat, sparks, electrical equipment, and open flame. **DO NOT SMOKE.** Use only in well ventilated areas. May cause eye/respiratory tract irritation. May cause skin sensitization after prolonged contact. May cause gastrointestinal disturbance.

**CARTRIDGE No. 2 =>SIKADUR INJECTION RESIN (A+B)**

**PART A: WARNING: IRRITANT, SENSITIZER.** Contains bisphenol A-(epichlorhydrin) epoxy resin (CAS: 25068-38-6), 1,6-bis(2,3-epoxypropoxy)hexane (CAS: 16096-31-4) and bisphenol F-(epichlorhydrin) epoxy resin (CAS: 28064-14-4). Causes skin/eye irritation. Harmful if swallowed. May cause respiratory tract irritation. May cause allergic skin reaction after prolonged contact.

**PART B: WARNING: CORROSIVE, IRRITANT, SENSITIZER.** Avoid direct contact. Contains 2-piperazin-1-ylethylamine (CAS: 140-31-8), Phenol, styrenated (CAS: 61788-44-1), Benzyl alcohol (CAS: 100-51-6), 2,4,6-tris(dimethylaminomethyl)phenol (CAS: 90-72-2), 1,3-Cyclohexanedimethanamine (CAS: 2579-20-6), Salicylic acid (CAS: 69-72-7) and Cyclohexanone (CAS: 108-94-1). Causes eye/skin burns. Harmful if swallowed. May cause irritation/burns to the digestive tract. May cause allergic skin reaction after prolonged contact. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. **Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal. Strictly follow all usage, handling and storage instructions.**

**First Aid**

**Eye Contact:** In case of contact, immediately flush eyes out with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately. **Skin Contact:** In case of contact, immediately flush skin with plenty of soap and water. Get medical attention immediately.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Seek medical attention or call poison control.

**General Advice:** In case of accident or if you feel unwell, seek medical attention immediately. (Show the label or MSDS where possible.)

**Note to Physicians:** Symptoms may not appear immediately.

**Handling and Storage**

Store dry at 40°-75° F (5°-24° C).

This crack injection kit contains epoxy resin and hardener systems, which are currently classified as hazardous materials. Wear suitable protective clothing, eye/face protection and gloves, and ensure adequate ventilation. For more health and data info, please refer to the relevant Material Safety Data Sheet.

**Clean Up**

After the resin has been allowed to cure, the injection ports and capseal should be mechanically removed and any holes or voids should be filled.

**Important Note**

While all reasonable care is taken in compiling technical data on the Company's products, all recommendations or suggestions regarding the use of such products are made without guarantee, since the conditions of use are beyond the control of the Company. It is the customer's responsibility to satisfy himself that each product is fit for the purpose for which he intends to use it, that the actual conditions of use are suitable and that, in the light of our continual research and development program, the information relating to each product has not been superseded.

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