

Sikadur® Crack Weld

Crack Injection Kit

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

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 (68.9)	9000 (62.1)	10,000 (68.9)	10,000
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



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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

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.

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.



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Construction

	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	<ul style="list-style-type: none"> ■ 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.

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Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537



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