

Product Data Sheet

Edition 06.2011/v1
Sikadur® Crack Fix

Sikadur® Crack Fix

Low-Viscosity and High-Strength Epoxy Resin Injection Resin, Sealer and Adhesive

Description	Sikadur® Crack Fix, is a two-component, 100% solids and solvent-free, moisture-tolerant, low-viscosity, and high-strength multi-purpose epoxy resin.
Where to Use	<ul style="list-style-type: none"> ■ Low pressure injection of cracks in structural concrete, masonry, wood, etc. ■ Grouting around bolts, dowels, pins and fixings. ■ Thin layer, high strength adhesive for bonding hardened concrete. ■ Gravity feeding of cracks in horizontal concrete, masonry, wood etc. ■ Sealing interior slabs and exterior above grade slabs.
Advantages	<ul style="list-style-type: none"> ■ Convenient, easy to use single tube cartridge; fits standard caulking gun. ■ No mess, self-mixing through nozzle. ■ Low viscosity; allows material to penetrate and seal fine, hairline cracks. ■ Deep penetration and tenacious crack bonding in structural concrete. ■ Moisture tolerance: for “can’t dry” cracks and surfaces. ■ High early-strength development and five times stronger than concrete. ■ Conforms to current ASTM C881 and AASHTO M-235 specifications.

Technical Data

Packaging	180 mL (6 US fl. oz) Pre-Pack cartridge, 12 per case.		
Colour	Clear, amber		
Yield	One cartridge yields approximately 175 - 180 mL (10.7 -11 in ³) of usable resin.		
Shelf Life	2 years in original, unopened packaging. Store dry at 4 to 35°C (39 to 95°F). Condition product at 15 to 24°C (59 to 75°F) before using.		
Mix Ratio	A:B = 2:1 by volume		
Properties at 23°C (73°F) and 50 % R.H.			
Viscosity (mixed)	Approx. 375 cps		
Pot Life (60 g)	Approx 25 min		
Tack Free Time	4°C (39°F)*	23°C (73°F)*	32°C (89°F)*
3-5 mils	14 - 16 hrs	3 - 3.5 hrs	1.5 - 2 hrs
Compressive Strength ASTM D695, MPa (psi)		Neat	
	4°C (39°F)*	23°C (73°F)*	32°C (89°F)*
4 hrs	-	-	-
8 hrs	-	1.2 (180)	22 (3200)
16 hrs	-	31.1 (4500)	43.5 (6300)
1 day	-	41.4 (6000)	62.8 (9100)
3 days	27.6 (4000)	62.1 (9000)	72.5 (10 500)
7 days	46.9 (6800)	75.9 (11 000)	72.5 (10 500)
14 days	71.1 (10 300)	82.8 (12 000)	72.5 (10 500)
28 days	85.6 (12 400)	89.7 (13 000)	72.5 (10 500)
* Product cured and tested at the temperatures indicated			
Compressive Modulus			
7 days	2000 MPa (2.9 x 10 ⁵ psi)		
Tensile Properties ASTM D638			
7 days	Tensile strength	48.3 MPa (7000 psi)	
	Elongation at break	6.9%	
Flexural Properties ASTM D790			
14 days	Flexural Strength (Modulus of Rupture)	75.9 MPa (11 000 psi)	
	Tangent Modulus of Elasticity in Bending	2139 MPa (3.6 x 10 ⁵ psi)	
Shear Strength ASTM D732			
14 days	33.1 MPa (4800 psi)		
Heat Deflection Temperature ASTM D648			
14 days, Fiber stress loading = 1.8 MPa (264 psi)	49°C (120°F)		
Bond Strength ASTM C882 (Hardened concrete to hardened concrete)			
2 days	Moist cure	9.0 MPa (1300 psi)	
14 days	Moist cure	9.3 MPa (1350 psi)	
Water Absorption ASTM D570			
7 days	24 hr immersion	0.27%	



How to Use

Surface Preparation

Surfaces must be clean, sound and preferably dry.

The crack or void to be grouted or the concrete to be sealed or bonded may be dry or damp, but must be free of standing water. For optimum performance in terms of penetration and adhesion, surfaces are best dry.

Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles and loose friable materials using suitable techniques, including sandblasting or power wire brushing.

Surfaces, cracks and voids must then be cleaned, by suitable means, such as blowing clean with oil free compressed air or vacuuming to remove all penetration or bond inhibiting material.

Cartridge set-up

Remove twist cap and port plug from the top of the cartridge. Press one of the 'flow restrictors' into the opening. Insert a static mixing nozzle (as supplied) through the twist cap and attach to the threaded section.

Insert the Sikadur® Crack Fix cartridge into a good quality caulking gun. Proceed with a purge of any air possibly entrapped in the system by pointing the gun upwards and squeezing the trigger. In order to ensure a uniform blend of the resin components, a second squeeze will be needed to purge some mixed resin before starting application. The extracted material will be discarded.

Application

To pressure inject cracks - Set appropriate injection ports. Bond ports and seal the face of the crack with Sika® AnchorFix®-1 or Sika® AnchorFix®-3^{CA}-4^{CA}. When the epoxy adhesive and crack seal has cured, inject Sikadur® Crack Fix with slow, steady pressure. When completed, the injection ports can be knocked off and the adhesive and crack seal ground off to mask the works. Consult Sika Canada Technical Services for additional information where required.

To anchor bolts, dowels and pins in horizontal surfaces - Annular space around bolt should not exceed 3 mm (1/8 in). Depth of embedment is typically 10 - 15 times the bolt diameter. Grout with neat Sikadur® Crack Fix, injecting the material into the back of the hole and working upwards, followed by placing the fixing and rotating it into the filled hole so as to prevent air pockets.

To seal slabs - Spread neat Sikadur® Crack Fix over the slab, using a squeegee or roller and allow the material to penetrate. Remove excess material to prevent a surface film forming. Seal interior slabs and above grade, exterior slabs only.

To gravity feed cracks - Seal the underside of the slab if the crack reflects right through the depth of concrete. Inject neat Sikadur® Crack Fix into v-notched crack and continue placement until the crack is completely filled.

Clean Up

Uncured material can be removed using Sika® Equipment Cleaner. Cured product can only be removed mechanically. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.

Limitations

- Not suitable for use to seal exterior slabs on grade.
- Do not use for injection of cracks under hydrostatic pressure.
- Minimum age of concrete must be 21 - 28 days depending on curing and drying conditions.
- A wet glistening surface with standing water is not suitable for the application of the material.
- Minimum surface and air temperature during application: 4°C (39°F). Maximum substrate temperature during application: 35°C (95°F)
- Product is not aesthetic; the colour may alter due to variations in exposure to UV and lighting.
- Do not thin material with solvents or modify in any way as this will result in unpredictable results for which the manufacturer cannot be held responsible.
- Not to be injected into cracks greater than 6 mm (1/4 in) in width. Consult Sika Canada Technical Services for guidance.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the product label and the **most recent Material Safety Data Sheet** containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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 products when properly stored, handled and applied under normal conditions, within their shelf life. 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 recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request or can be accessed in the Internet under www.sika.ca.

Sika Canada Inc.

Quebec
601 Delmar Avenue
Pointe-Claire, QC H9R 4A9
Tel.: 514-697-2610
Fax: 514-697-3087

Ontario
6915 Davand Drive
Mississauga, ON L5T 1L5
Tel.: 905-795-3177
Fax: 905-795-3192

Alberta
18131-114th Avenue N.W.
Edmonton, AB T5S 1T8
Tel.: 780-486-6111
Fax: 780-483-1580

1-800-933-SIKA
www.sika.ca

An ISO 9001 certified company
Pointe-Claire : ISO 14001 certified EMS

