



PRODUCT DATA SHEET

Edition 12.2018/v1

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 temperatures between 4 and 35 °C (39 to 95 °F). Condition product at temperatures between 15 and 24 °C (59 and 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 minutes		
Tack-free Time	4 °C (39 °F)*	23 °C (73 °F)*	32 °C (89 °F)*
3-5 mils	14 - 16 hours	3 - 3 h 30 min	1 h 30 min - 2 hours
Compressive Strength ASTM D695, MPa (psi)			
	Neat		
	4 °C (39 °F)*	23 °C (73 °F)*	32 °C (89 °F)*
4 hours	-	-	-
8 hours	-	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 hour immersion	0.27 %	

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

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.

Note: Do not use the purged material as it is unlikely to be blended and therefore will not perform accordingly.

Application

To pressure inject cracks - Set appropriate injection ports. Bond ports and seal the face of the crack with Sika® AnchorFix®-1 or Sikaset® Plug. 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 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 most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN

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 shelflife. 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 information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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