

## PRODUCT DATA SHEET

# Sikadur®-52 Injection Normal

EPOXY LOW VISCOSITY INJECTION RESIN - NORMAL POT LIFE



### DESCRIPTION

Sikadur®-52 Injection Normal is a 2-part, epoxy, low viscosity, normal pot life, injection resin specially formulated for crack injection work by either pressure injection or gravity feed techniques.

### USES

Sikadur®-52 Injection Normal may only be used by experienced professionals.

- Crack injection resin
- Fills and seals voids and cracks in structures such as bridges, civil engineering structures, industrial and residential buildings, e.g. columns, beams, foundations, walls, floors and water retaining structures.
- Structural bonding
- Preventing ingress of water and infiltration of reinforcement corrosion promoting substances

### CHARACTERISTICS / ADVANTAGES

- Injection temperature range +5 °C to +30 °C
- Good adhesion to concrete, masonry, stone, steel and wood substrates
- Suitable for both, dry and damp conditions
- Maximum crack width 5,0 mm
- Good mechanical properties
- High mechanical and adhesive strengths
- Hard but not brittle
- Low viscosity
- Injectable with single component pumps

### APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to EN 1504-5 - Concrete injection
- Fire Testing DIN EN 13501-1, Sikadur®-52 Injection Normal, MPA Braunschweig, Test report No. K-3604/805/13-MPA BS

### PRODUCT INFORMATION

<b>Packaging</b>	Parts A+B	1 kg pre-batched unit Box of 10 units
	Bulk	On request
<b>Colour</b>	Part A	Transparent
	Part B	Brownish
	Part A+B mixed	Yellowish-brownish
<b>Shelf life</b>	24 months from date of production	
<b>Storage conditions</b>	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to packaging.	

Density	Part A	1,121 kg/l	(EN ISO 2811-1)
	Part B	1,006 kg/l	
	Part A+B mixed	1,100 kg/l	

all values at +22 °C

Viscosity	<b>Temperature</b>	<b>Part A+B mixed</b>	(EN ISO 3219)
	+10 °C	~1200 mPa·s	
	+20 °C	~430 mPa·s	
	+30 °C	~220 mPa·s	

## TECHNICAL INFORMATION

Compressive Strength	<b>Time</b>	<b>+5 °C</b>	<b>+23 °C</b>	<b>+30 °C</b>	(ASTM D695-96)
	1 day	-	32 N/mm <sup>2</sup>	43 N/mm <sup>2</sup>	
	3 days	11 N/mm <sup>2</sup>	52 N/mm <sup>2</sup>	51 N/mm <sup>2</sup>	
	7 days	53 N/mm <sup>2</sup>	55 N/mm <sup>2</sup>	55 N/mm <sup>2</sup>	

Modulus of Elasticity in Compression	<b>Time</b>	<b>+5 °C</b>	<b>+23 °C</b>	<b>+30 °C</b>	(ASTM D695-96)
	1 day	-	700 N/mm <sup>2</sup>	650 N/mm <sup>2</sup>	
	3 days	650 N/mm <sup>2</sup>	1100 N/mm <sup>2</sup>	1000 N/mm <sup>2</sup>	
	7 days	1500 N/mm <sup>2</sup>	1250 N/mm <sup>2</sup>	1000 N/mm <sup>2</sup>	

Tensile Strength in Flexure	<b>Time</b>	<b>+5 °C</b>	<b>+23 °C</b>	<b>+30 °C</b>	(DIN 53452)
	1 day	-	36 N/mm <sup>2</sup>	51 N/mm <sup>2</sup>	
	3 days	11 N/mm <sup>2</sup>	59 N/mm <sup>2</sup>	60 N/mm <sup>2</sup>	
	7 days	38 N/mm <sup>2</sup>	63 N/mm <sup>2</sup>	67 N/mm <sup>2</sup>	

Modulus of Elasticity in Flexure	<b>Time</b>	<b>+5 °C</b>	<b>+23 °C</b>	<b>+30 °C</b>	(DIN 53452)
	1 day	-	850 N/mm <sup>2</sup>	1450 N/mm <sup>2</sup>	
	3 days	700 N/mm <sup>2</sup>	1400 N/mm <sup>2</sup>	1600 N/mm <sup>2</sup>	
	7 days	1500 N/mm <sup>2</sup>	1600 N/mm <sup>2</sup>	1750 N/mm <sup>2</sup>	

Tensile Strength	<b>Time</b>	<b>+5 °C</b>	<b>+23 °C</b>	<b>+30 °C</b>	(ISO 527)
	1 day	-	23 N/mm <sup>2</sup>	26 N/mm <sup>2</sup>	
	3 days	5 N/mm <sup>2</sup>	35 N/mm <sup>2</sup>	39 N/mm <sup>2</sup>	
	7 days	30 N/mm <sup>2</sup>	37 N/mm <sup>2</sup>	37 N/mm <sup>2</sup>	

Modulus of Elasticity in Tension	<b>Time</b>	<b>+5 °C</b>	<b>+23 °C</b>	<b>+30 °C</b>	(ISO 527)
	1 day	-	1250 N/mm <sup>2</sup>	1400 N/mm <sup>2</sup>	
	3 days	550 N/mm <sup>2</sup>	1800 N/mm <sup>2</sup>	1900 N/mm <sup>2</sup>	
	7 days	1800 N/mm <sup>2</sup>	1800 N/mm <sup>2</sup>	1800 N/mm <sup>2</sup>	

Elongation at Break	<b>Time</b>	<b>+5 °C</b>	<b>+23 °C</b>	<b>+30 °C</b>	(ISO 527)
	1 day	-	21 %	16 %	
	3 days	57 %	16 %	9 %	
	7 days	22 %	8 %	7 %	

Tensile Adhesion Strength	Concrete: > 4 N/mm <sup>2</sup> (failure in concrete) (after 7 days at + 23 °C)	(acc. to DafStb-Richtlinie, Part 3)
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Coefficient of Thermal Expansion	~8,9×10 <sup>-5</sup> 1/K (linear expansion between -20 °C and +40 °C)	(EN ISO 1770)
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## APPLICATION INFORMATION

Mixing Ratio	Part A : Part B = 2 : 1 parts by weight	
Yield	1 kg of injection resin: ~0,93 L	
Substrate Temperature	+5 °C min. / +30 °C max	
Substrate Moisture Content	Dry or damp (SSD - Saturated Surface Dry: no standing water)	
Pot Life	<b>Temperature</b>	<b>1 kg</b>
	+5 °C	~120 minutes
	+10 °C	~80 minutes
	+23 °C	~25 minutes
	+30 °C	~10 minutes

The potlife begins when Parts A+B are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quantity mixed, the shorter the potlife. To obtain longer workability at high temperatures, the mixed adhesive may be divided into smaller quantities. Another method is to chill Parts A+B before mixing (not below +5 °C).

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

Substrate surfaces along the line of the crack capping sealer i.e. Sikadur®-31 EF, must be sound, clean, dry or matt damp. Free from standing water, ice, dirt, oil, grease, coatings, laitance, efflorescence, old surface treatments, all loose particles and any other surface contaminants that could affect adhesion. Cracks must be clean.

### SUBSTRATE PREPARATION

After inserting or bonding injection ports, cap the crack with a capping sealer, allow to cure then purge cracks with resin until the resin runs clean and contaminant free.

### MIXING

Add all of Part B to Part A. Mix with a mixing spindle attached to a slow speed electric (max. 250 rpm) for at least 3 minutes. Over mixing must be avoided to minimise air entrainment. Mix full units only.

### APPLICATION METHOD / TOOLS

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.

Preliminary trials must be carried out by a competent applicator experienced in crack injection using injection equipment and appropriate injection pressures.

### CLEANING OF EQUIPMENT

Removal of fresh remnants from tools and application equipment can be carried out using Sika® Injection Cleaning System immediately after use in accordance with the Product Data Sheet. Hardened material can only be mechanically removed.

## IMPORTANT CONSIDERATIONS

- Do not inject into wet or saturated cracks.
- Do not add solvent to the product.
- Do not inject cracks under hydrostatic pressure.
- Do not inject crack widths >5,0 mm.
- At higher temperatures pot life will be shortened.
- At lower temperatures pot life will be increased but product will become more difficult to inject and take longer to harden.
- Trials should be carried out to establish suitability of resin, spacing of injection ports, injection equipment and pressures.

## BASIS OF PRODUCT DATA

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.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## 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 products when

properly stored, handled and applied under normal conditions in accordance 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.

**Sika Hellas ABEE**

15 Protomagias Str.  
14568 Kryoneri  
Attica-Greece  
Tel.: +30 210 8160 600  
Fax: +30 210 8160 606  
www.sika.gr | sika@gr.sika.com



**Product Data Sheet**

Sikadur®-52 Injection Normal  
May 2020, Version 01.01  
020707030010000004

Sikadur-52InjectionNormal-en-GR-(05-2020)-1-1.pdf

