BUILDING TRUST

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
- Two grades for different climatic conditions
- 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

Packaging	Parts A+B	1 kg pre-batched unit Box of 10 units
	Bulk	On request
	Please contact our customer service, for information of what packaging sizes are sold in Denmark.	
Colour	Part A	Transparent
	Part B	Brownish
	Part A+B mixed	Yellowish-brownish
Shelf life	24 months from date of production	
Storage conditions	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

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

all values at +22 °C

Viscosity

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

TECHNICAL INFORMATION

Compressive strength (ASTM D695-96)

Time	+5 °C	+23 °C	+30 °C
1 day	-	32 N/mm²	43 N/mm²
3 days	11 N/mm²	52 N/mm²	51 N/mm²
7 days	53 N/mm²	55 N/mm²	55 N/mm²

Modulus of elasticity in compression (ASTM D695-96)

Time	+5 °C	+23 °C	+30 °C
1 day	-	700 N/mm²	650 N/mm²
3 days	650 N/mm²	1100 N/mm²	1000 N/mm²
7 days	1500 N/mm²	1250 N/mm²	1000 N/mm²

Tensile strength in flexure (DIN 53452)

Time	+5 °C	+23 °C	+30 °C
1 day	-	36 N/mm²	51 N/mm²
3 days	11 N/mm²	59 N/mm²	60 N/mm²
7 days	38 N/mm²	63 N/mm²	67 N/mm²

Modulus of elasticity in flexure (DIN 53452)

Time	+5 °C	+23 °C	+30 °C
1 day	-	850 N/mm²	1450 N/mm²
3 days	700 N/mm²	1400 N/mm²	1600 N/mm²
7 days	1500 N/mm²	1600 N/mm²	1750 N/mm²

Tensile strength (ISO 527)

Time	+5 °C	+23 °C	+30 °C
1 day	-	23 N/mm²	26 N/mm²
3 days	5 N/mm²	35 N/mm²	39 N/mm²
7 days	30 N/mm²	37 N/mm²	37 N/mm²

Modulus of elasticity in tension (ISO 527)

Time	+5 °C	+23 °C	+30 °C
1 day	-	1250 N/mm²	1400 N/mm²
3 days	550 N/mm²	1800 N/mm²	1900 N/mm²
7 days	1800 N/mm²	1800 N/mm²	1800 N/mm²

Tensile strain at break (ISO 527)

Time	+5 °C	+23 °C	+30 °C
1 day	-	21 %	16 %
3 days	57 %	16 %	9 %
7 days	22 %	8 %	7 %

Tensile adhesion strength

Concrete:
> 4 N/mm² (failure in concrete) (acc. to DafStb-Richtlinie, Part 3)
(after 7 days at + 23 °C)

Coefficient of thermal expansion

~8,9×10^{-5} 1/K (EN ISO 1770)
(linear expansion between -20 °C and +40 °C)

APPLICATION INFORMATION

Mixing ratio

Part A : Part B = 2 : 1 parts by weight

Consumption

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

Temperature	1 kg
+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 CF Rapid, 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

Clean all tools and application equipment using the Sika® Injection Cleaning System 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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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