

PRODUCT DATA SHEET

Sikadur[®]-52 CN

Low viscosity injection resin

DESCRIPTION

Sikadur[®]-52 CN is two parts, solvent-free, low viscosity injection-liquid, based on high strength epoxy resin.

USES

Sikadur[®]-52 CN is used to fill and seal voids and cracks in structures.

CHARACTERISTICS / ADVANTAGES

- Solvent-free
- Shrinkage free hardening
- High mechanical and adhesive strengths
- Hard but not brittle
- Low viscosity

APPROVALS / STANDARDS

- Meet "Technical code for safety appraisal of engineering structural strengthening materials" GB 50728-2011, table 4.6.4
- Meet the requirements of crack repair adhesive 0.2 mm ≤ ω < 0.5 mm in table 4.8.1 of GB 50728-2011

PRODUCT INFORMATION

Chemical Base	Epoxy resin	
Packaging	10 kg (A+B)	Pre-batched unit
	Component A	6.67 kg pails
	Component B	3.33 kg pails
Shelf Life	24 months from date of production	
Storage Conditions	Store in original, unopened, sealed and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C. Protect from direct sunlight.	
Colour	Component A: Transparent Component B: Brownish Components A + B mixed: Yellowish-brownish	
Density	~ 1.10 kg/L (component A+B mixed) (at +23 °C)	
Viscosity	200 ~ 300 mPa·s (at +23°C)	

TECHNICAL INFORMATION

Compressive Strength	≥122 MPa (3 days)	(BS6319 : Part2 : 1983)	
	≥125 MPa (7 days)	(BS6319 : Part2 : 1983)	
Tensile Strength in Flexure	≥41.6 N/mm ² (3 days)	(BS6319 : Part3 : 1990)	
	≥55.8 N/mm ² (7 days)	(BS6319 : Part3 : 1990)	
Tensile Strength	≥24.8 MPa (3 days)	(BS6319 : Part7 : 1985)	
	≥27.8 MPa (7 days)	(BS6319 : Part7 : 1985)	
Modulus of Elasticity in Tension	≥1.5×10 ³ MPa	(GB 50728-2011)	
Elongation at Break	≥1.7 %	(GB 50728-2011)	
Shear Strength	≥45 N/mm ² (Slant shear bond strength)	(BS6319 : Part4 : 1984)	
Tensile Adhesion Strength	Dry concrete substrate	Damp concrete substrate	(GB 50728-2011)
	≥ 2.5 MPa, failure in concrete	≥ 1.8 MPa, failure in concrete	
Shrinkage	≤ 0.3%	(GB 50728-2011)	

APPLICATION INFORMATION

Mixing Ratio	A : B = 2 : 1 (by weight)	
Substrate Temperature	+5°C ~ +30°C	
Substrate Moisture Content	Dry without clear water	
Pot Life	Temperature	Time
	+23°C	~30min

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.

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.

APPLICATION INSTRUCTIONS

NOTES ON INSTALLATION

This product should be constructed by experienced professionals.

In the case of supercooling or overheating construction, materials should be placed in the temperature controlled storage room for 24 hours in advance to improve the constructability and open time.

Ensure that the construction is carried out within the open time of the glue. The open time is long when the temperature is low, and short when the temperature is high. The larger the amount of mixing, the shorter the construction time. At high temperature, if long

open time is needed, the mixture can be divided into several small parts, or A and B components can be cooled before mixing (the cooling temperature is not less than + 10 °C). Sikadur®-52 CN must avoid contact with rain for at least 24 hours after construction.

SUBSTRATE PREPARATION

Substrates must be sound, clean, free from oil and grease, old coatings and surface treatments etc. The outer substrates of concrete within 5 cm on both sides of the cracks shall be polished. Cracks must be cleaned to remove dust and water by using compressed air.

MIXING

Add component B to component A. Mix with an electric mixer at slow speed (max. 250 rpm) for at least 3 minutes. Avoid entraining air. Mix only that quantity which can be used within its pot life.

APPLICATION METHOD / TOOLS

Cracks in horizontal slabs:

Deadweight method : Chisel V-grooves at least 1 cm wide. The mixed Sikadur®-52 CN is injected into the cracks. The resin slowly penetrates into the cracks. The deadweight method is generally not suitable for the joints through the members, nor for the joints with very small width.

Pressure grouting method: Set grouting mouth every 30 ~ 50 cm. Seal all gaps with Sikadur®-31 CF Normal. According to the actual situation, one or more exhaust ports should be set on the seam. Use single component grouting machine (such as aliva al-1200 or other manual grouting pump) and special syringe to inject the mixed resin into the joint. Grouting should be carried out one by one, and the grouting pressure should be maintained at 0.2 ~ 0.3 MPa. After grouting at each grouting port, the pressure shall be maintained for 5 ~ 10 minutes.

After the resin hardens completely, cut off the grouting nozzle and grind off the sealing material.

Cracks in vertical structures:

Generally, pressure grouting method is used to carry out grouting construction from bottom to top one by one.

CLEANING OF TOOLS

Clean all equipment immediately with Sika® Colma Cleaner. Cured material can only be removed mechanically.

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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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