

Sikadur[®]-52

Low viscosity epoxy resin

Construction

Description	Sikadur-52 is a low viscosity, free flowing and fast curing injection resin and primer/coating based on a 2 component solvent free epoxy resin; ideally suited to a wide range of building and civil engineering applications where highly penetrative material is required. It is available in two grades, Normal and Long Potlife for moderate and high ambient temperatures respectively.
Uses	<p>Sikadur-52 may be used to inject and fill cracks between 0.2 - 5 mm wide in a wide variety of constructions applications. Sikadur-52 does not shrink on curing and forms a rigid, high strength product which exhibits excellent adhesion to most construction materials enabling the restoration of structural adequacy to columns, beams, foundations, decks and water retaining structures.</p> <p>Due to its highly penetrative nature Sikadur-52 is ideally suited for application as a primer beneath Sikadur epoxy mortars or Sikafloor mortars and coatings on dense substrates. Sikadur-52 may also be used to stabilise weak and friable substrates. Special high strength grades can be made to order.</p>
Advantages	<ul style="list-style-type: none"> ▪ Shrink free ▪ Insensitive to moisture during application, cure or whilst in service ▪ Applicable over wide temperature range ▪ Low viscosity ▪ Excellent adhesion to most building materials even when damp ▪ Proven in service ▪ High tensile and flexural strength ▪ Supplied in factory proportioned units ▪ High early strength ▪ Chemical resistant
Storage and Shelf Life	Minimum shelf life is approximately 3 years. Store under controlled conditions in original containers (minimum 5°C, maximum 35°C temperature range).
Instructions for Use	
Surface Preparation	<p>All surfaces to be coated should be mechanically roughened, free from all contaminants (eg. dust, oil, grease, etc.) surface water, laitance, old coatings, corrosion products. Suitable methods of preparation include blast cleaning and scabbling. For optimum penetration the substrate should be dry.</p> <p>When Sikadur-52 is used to inject cracks, the cracks must be blown out with oil free, dry compressed air. Cracks in the width range of 0.2 - 5 mm may be successfully injected.</p>
Mixing	Sikadur-52 is supplied in factory proportioned units comprising the correct quantities of Part A (Resin) and Part B (Hardener). Thoroughly stir both components separately using a slow running drill with a windmill type paddle (max. speed 600 rpm). Decant all of Part B into Part A and mix thoroughly (typically 3 mins). (Not applicable to twin cartridge packs).
Application	When applied as a primer/coating Sikadur-52 should be worked well into the substrate. This is particularly important on damp surfaces. Ensure the attainment of an overall gloss sheen but do not allow the material to puddle. If Sikadur-52 is used as a primer for Sikadur epoxy mortars and Sikafloor mortars and coatings it should be allowed to cure (but no more than 24 hours old) prior to applying the ensuing Sikadur/Sikafloor materials. (Please refer to the relevant Sikadur/Sikafloor Technical Data sheets for further details).

Application (continued)

When used to fill cracks Sikadur-52 may be gravity fed or pressure injected for horizontal surfaces. Only pressure injection is suitable for vertical or overhead cracks.

To fill horizontal cracks under gravity construct a reservoir above the crack, fill with Sikadur-52 and allow to penetrate. Residual material may be ground off when fully cured. Vertical and overhead cracks should have injection nipples fixed centrally over the crack (between 30 - 50 cm centres) using Sikadur-31 or Sika Anchorfix-1. Seal the surface of the crack with Sikadur-31 or Sika Anchorfix-1. Allow to cure.

Commence injection under pressure from one end of the crack (the lowest nipple on vertical cracks) until the Sikadur-52 exudes from the next nipple, seal off the first and proceed to inject from the second nipple etc. Once the crack is filled and Sikadur-52 fully cured remove the nipples and use a gas torch and paint scraper or grind the surface back to line and level. For further details on crack injection please refer to our Technical Department.

Cleaning

Uncured material may be cleaned from application tools, etc. by using Sika Colma Cleaner (flammable solvent). Cured material can only be removed mechanically.

Technical and Physical Data

Form	Low viscosity liquid		
Density	1.1 kg / litre approx.		
Volume solids	100% (solvent free)		
Mix ratio	A : B = 2 : 1 by weight and volume for Normal and Long Potlife		
Viscosities A & B mixed	Normal @ 20°C	Long Potlife @ 20°C	
	300 MPa.s approx. @ 20°C	240 MPa.s approx. @ 20°C	
	110 MPa.s approx @ 35°C	100 MPa.s approx. @ 35°C	
	<i>Note: 1 MPa.s = 1 centipoise</i>		
Comprehensive strength @ 24 hours (BS 6319) @ 7 days	Normal @ 20°C	Long Potlife @ 20°C	Long Potlife @ 35°C
	44 MPa approx. 54 MPa approx	32 MPa approx. 48 MPa approx.	40 MPa approx. 52 MPa approx.
Tensile strength @ 7 days (BS 6319)	Normal @ 20°C	Long Potlife @ 35°C	
	22 MPa approx.	22 MPa approx.	
Adhesion to concrete	>3.5 MPa approx. @ 20°C (<i>cohesive failure of concrete</i>)		
Adhesion to sandblasted steel	10 MPa approx. both grades		
Application Temperature (min. – max.)	5°C- 30°C (Normal) 20°C - 40°C(Long Potlife) (<i>substrate and ambient temperatures</i>)		
ASTM C881-78	Complies with Type 1, Grade 1 Class B & C		
Consumption/Coverage	1.1 kg/m ² approx. per mm thickness (<i>dependent on surface profile, texture, temperature, porosity and wastage</i>)		
Colour	Part A – Semi-Transparent (pale yellow), Part B – Transparent (pale brown) Mixed product pale straw colouration		
Packaging	450 ml twin cartridge		
	3.0 kg and 8.0 kg net pre-proportioned kits		
Potlife	Temperature	Normal	Long Potlife
	5°C	70 mins approx.	-
	20°C	27 mins approx.	55 mins approx.
	35°C	16 mins approx.	23 mins approx.

Important Notes

- If the Part A shows signs of crystallisation, before application place the Sikadur-52 cartridge or container in warm water (heated to 60°C) for at least one hour.
- Do not apply to surfaces with standing water or to water saturated cracks.
- For optimum penetration and adhesion substrates should be dry.
- Maximum moisture content of the substrate 10%.
- Do not part mix containers to avoid mix ratio errors.
- Do not dilute the product with solvent as this will affect both the cure and in-service performance.
- Constant in-service temperatures >70°C may affect the performance of the product.
- Maximum application thickness 5mm.
- Not suitable for injection into cracks less than 0.2 mm or greater than 5mm wide.
- Maximum permissible substrate temperature 30°C (Normal), 40°C (Long Potlife).
- If in doubt, consult our Technical Department.
- Minimum age of new concrete 3 to 6 weeks, depending on thickness.
- Do not apply Sikadur-52 (Normal) to substrates lower than 5°C and Sikadur-52 (Long Potlife) to substrates lower than 20°C.
- The temperature at which the Sikadur-52 is stored during the 24 hours before it is mixed will govern its potlife when mixed.
- Compressive strengths etc. of epoxy resins must be qualified by the testing method eg. Test Standard or size of specimen under test and the rate at which the test piece is loaded while under test, as these factors will affect the result markedly. Faster loading rates will generally give higher ultimate loads and vice versa. Also, a specimen at lower temperature will show higher strengths and vice versa.

Handling Precautions

- Avoid contact with the skin, eyes and avoid breathing its vapour.
- Wear protective gloves when mixing or using.
- If poisoning occurs, contact a doctor or Poisons Information Centre.
- If swallowed, do NOT induce vomiting. Give a glass of water.
- If skin contact occurs, remove contaminated clothing and wash skin thoroughly.
- If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.
- For more detailed information refer to our Material Safety Data Sheet.

Important Notification

The information, and, in particular, the recommendations relating to the application and end-use of Sika's 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 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 proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

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