

Sikadur®-52 Injection type N and LP

Very Low Viscosity Injection Resins

Product Description	Sikadur®-52 Injection Type N and Type LP are two-part, solvent-free, low viscosity injection-liquids, based on high strength epoxy resins. Type N (= Normal Potlife) is used for substrate temperatures between +5°C and +30°C. Type LP (= Long Potlife) is used for substrate temperatures between +25°C and +40°C Suitable for use in hot and tropical climates.
Uses	As an injection resin with good adhesion to concrete, mortar, stone, steel and wood. Sikadur®-52 Injection Type N and Type LP are used to fill and seal voids and cracks in structures such as bridges and other civil engineering buildings, industrial and residential buildings, e.g. columns, beams, foundations, walls, floors and water retaining structures. It not only forms an effective barrier against water infiltration and corrosion promoting media, but it also structurally bonds the concrete sections together.
Advantages	<ul style="list-style-type: none">■ Solvent-free■ Suitable in both, dry and damp conditions■ Useable at low temperatures■ Two grades for different climatic conditions (normal and long pot life)■ Shrinkage-free hardening■ High mechanical and adhesive strengths■ Hard but not brittle■ Low viscosity■ Injectable with single component pumps
Product Data	
Form	Solvent Free Epoxy Resin
Colours	Component A: Transparent Component B: Brownish Components A+B mixed: Yellowish-brownish
Packaging	Pre-batched: Components A+B: 4 kg units Bulk packaging On request
Storage Condition / Shelf life	24 months from date of production if stored properly in unopened, undamaged and sealed original packaging, in dry conditions at temperatures between +5°C and +30°C.



Technical Data

Chemical Base	Modified solvent-free, two-part epoxy resin		
Density of mix	Components A+B: 1.1 kg/lit (mixed)		
Viscosity	Temperature	Type Normal part A+B mixed (2 : 1)	Type Long Pot life part A+B mixed (2 : 1)
	+10°C	~ 1200 mPas	-
	+20°C	~ 430 mPas	~ 330 mPas
	+30°C	~ 220 mPas	~ 150 mPas
	+40°C	-	~ 95 mPas
Thermal Expansion Coefficient	Type Normal: 89 x 10 ⁻⁶ per °C (from -20°C to +40°C)	(According to EN ISO 1770)	
	Type Long Pot life: 94 x 10 ⁻⁶ per °C (from -20°C to +40°C)	(According to EN ISO 1770)	
Compressive Strength	Type Normal: 52 N/mm ² (after 7 days at +23°C)	(According to ASTM D695-96)	
	Type Long Pot life: 34 N/mm ² (after 7 days at +30°C)	(According to ASTM D695-96)	
Flexural Tensile Strength	Type Normal: 61 N/mm ² (after 7 days at +23°C)	(According to DIN 53452)	
	Type Long Pot life: 41 N/mm ² (after 7 days at +30°C)	(According to DIN 53452)	
Tensile Strength	Type Normal: 37 N/mm ² (after 7 days at +23°C)	(According to ISO 527)	
	Type Long Pot life: 24 N/mm ² (after 7 days at +30°C)	(According to ISO 527)	
Bond Strength	To concrete > 4 N/mm ² (failure in concrete) (after 7 days at +23°C)	(According to DafStb-Richtlinie, part 3)	
E-Modulus	Flexural Strength Type Normal: 1800 N/mm ² (after 7 days at +23°C)	(According to DIN 53 452)	
	Type Long Pot life: 1100 N/mm ² (after 7 days at +30°C)	(According to DIN 53 452)	
Application			
Consumption / Yield	1 kg of Sikadur®-52 Injection Type N and Type LP are ~ equal to 1 lit injection resin.		
Substrate Preparation	The substrate should be sound, clean, free from oil and grease, old coatings and surface treatments etc. Concrete, mortar, stone should be thoroughly prepared by high pressure water jetting or mechanical means such as grinding, chiselling etc. Cracks must be cleaned with compressed air to remove all dust.		
Substrate Temperature	Type Normal: +5°C minimum / +30°C maximum		
	Type Long Pot life: +25°C minimum / +40°C maximum		
Substrate Humidity	Dry or damp (SSD - Saturated Surface Dry: no standing water)		
Mixing	Type Normal and Long Potlife: Mixing ratio A : B = 2 : 1 parts by weight and by volume		
Mixing Time	Pre-batched packaging Add all of part B to part A. Mix with an electric mixer at slow speed (max. 250 rpm) for at least 3 minutes. Avoid entraining air. <i>Bulk packaging</i> Add both parts in the correct proportion into a suitable clean, dry container and mix in the same way as for the pre-batched units.		

Application Method / Tools	<p>Cracks in horizontal slabs: Saturate the cracks a few times using a brush or, gravity fill them by pouring mixed Sikadur®-52 Injection Type N and Type LP between two “dams” e.g. made from Sikaflex® sealant. Cracks penetrating slabs to their soffit should first be sealed on the underside, e.g. with Sikadur®-31 epoxy mortar or a suitable cementitious Sika mortar.</p> <p>Cracks in vertical structures: Mixed Sikadur®-52 Injection Type N and Type LP can be injected under pressure into the cracks using a single component injection pump, such as the Aliva AL-1200, AL-1250 or the Sika® Hand Pump. Injection ports (packers) are set at approximately 25 cm intervals beside the crack and the crack between the injection ports (packers) sealed e.g. with Sikadur®-31 to prevent injection resin escaping during the injection process. Vertical cracks should always be injected from the bottom upwards. As soon as injection resin oozes out of the next packer / injection port, the first one is sealed and the injection process continued from the next one. After completion of the injection process, the injection ports (packers) as well as the sealing material between the ports are removed.</p>																		
Cleaning of Tools	Clean all tools and application equipment with Sika® Colma-Cleaner immediately after use. Hardened/cured material can only be mechanically removed.																		
Potlife (2 kg)	<table border="1"> <thead> <tr> <th>Temperature:</th> <th>Normal Type (1kg mixture)</th> <th>Long Potlife Type (1kg mixture)</th> </tr> </thead> <tbody> <tr> <td>+ 5°C</td> <td>~120 minutes</td> <td>–</td> </tr> <tr> <td>+10°C</td> <td>~ 80 minutes</td> <td>–</td> </tr> <tr> <td>+ 23°C</td> <td>~ 25 minutes</td> <td>~70 minutes</td> </tr> <tr> <td>+ 30°C</td> <td>~ 10 minutes</td> <td>~30 minutes</td> </tr> <tr> <td>+ 40°C</td> <td>-</td> <td>~10 minutes</td> </tr> </tbody> </table>	Temperature:	Normal Type (1kg mixture)	Long Potlife Type (1kg mixture)	+ 5°C	~120 minutes	–	+10°C	~ 80 minutes	–	+ 23°C	~ 25 minutes	~70 minutes	+ 30°C	~ 10 minutes	~30 minutes	+ 40°C	-	~10 minutes
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Remarks	<p>Maximum width of cracks to be injected: 5 mm.</p> <p>Sikadur®-52 Injection Type N and Type LP are suitable for dry and damp, but not for wet injection conditions.</p>																		
Notes	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																		
Safety	For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.																		
Legal Notes	<p>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 should 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</p>																		



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