Construction

Sikadur®-52 LVMY

Very low viscosity injection resins

Product Description

Sikadur®-52 LVMY is a two part, solvent free, very low viscosity injection-liquids, based on high strength epoxy resins.

Uses

As an injection resin with good adhesion to concrete, mortar, stone, steel and wood. Sikadur®-52 LVMY is 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.

Characteristics / Advantages

- Solvent free
- Suitable for both, dry and damp conditions
- Shrinkage free hardening
- High mechanical and adhesive strengths
- Hard but not brittle
- Very low viscosity
- Injectable with single component pumps

Product Data

Form

Colours

- Part A: Transparent
- Part B: Brownish
- Part A+B mixed: Light brown

Packaging

2 kg and 15 kg sets

Storage

Storage Conditions / Shelf Life

2 years from the date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C. Protect from direct sunlight.

Technical Data

Chemical Base

Modified solvent free, two part, epoxy resin

Density (at +20°C)	■ Part A:	~ 1.065 kg/litre
	■ Part B:	~ 0.9 kg/litre
	■ Part A+B mixed (2 : 1):	~ 1.06 kg/litre
Viscosity	■ Part A:	205 cps at +25°C
	■ Part B:	20 cps at +25°C
	■ Part A+B mixed:	~ 90 cps at +25°C

Mechanical / Physical Properties

Compressive Strength	~ 60 N/mm^2 at 7 days	(ASTM D 695 on prism sample)
Bond Strength (after 28 days)	■ On concrete	> 3.0 N/mm^2 (concrete failure)

System Information

Application Details

Consumption / Yield	1 kg of Sikadur®-52 LVMY is approximately equal to 0.9 litre injection resin.
Substrate Quality	Sound, clean, free from oil and grease, old coatings and surface treatments, etc.
Substrate Preparation	*Pre-treatment for good bond* Concrete, mortar, stone should be thoroughly prepared by high pressure water jetting or mechanical means such as grinding, chiselling, etc. Cracks must be cleaned to remove dust with compressed air.

Application Conditions / Limitations

Substrate Temperature	+20°C min. / +40°C max.

Application Instructions

Mixing	Mixing ratio A : B = 2 : 1 parts by weight / volume
Mixing Time	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.
Application Method / Tools	*Cracks in horizontal slabs* Saturate a few times using a brush or gravity fill them by pouring mixed Sikadur®-52 LVMY between two “dams”, e.g. made from Sikaflex® sealant. Cracks penetrating slabs to their soffit should first be sealed on the underside the previous day, e.g. with Sikadur®-31 LP epoxy mortar or a suitable cementitious Sika mortar. *Cracks in vertical structures* Mixed Sikadur®-52 LVMY can be injected under pressure into the cracks using a single component injection pump, such as the Aliva AL-1200 or AL-1250. Injection ports (packers) are set at approx. 25 cm intervals beside the crack and the crack between the injection ports (packers) sealed e.g. with Sikadur®-31 LP to prevent injection resin to escape 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.

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Cleaning of Tools

Clean all tools and application equipment with Sika® Colma-Cleaner immediately after use. Hardened and / or cured material can only be mechanically removed.

Potlife

- +30°C 90 minutes

Notes on Application / Limitations

- Maximum width of cracks to be injected is 5 mm and minimum is approximately 0.1 mm
- Sikadur®-52 LVMY is suitable for dry and damp, but not for wet injection conditions
- Sikadur®-52 LVMY must be free of air bubbles to achieve maximum compressive strength
- Do not thin Sikadur®-52 LVMY. Solvents may prevent proper cure
- Sikadur®-52 LVMY is a highly reactive mixture with a relatively short pot-life. The reaction develops heat and if this heat is not allowed to escape, a considerable increase of the mixture temperature is created. This results in an additionally reduced pot-life for quantities of more than 1 kg. It is therefore important to make sure that the prepared Sikadur®-52 LVMY mixture can be rapidly injected into the crack and that it is never prepared in large quantities. The width of the crack should not exceed 5 mm
- During hot weather applications, it may be necessary to pre-cool the components (for example in a cool box used for picnic storage - temperature 10°C), but care must be taken to protect both Parts A and B from becoming wet
- The consumption of material depends entirely on the prevailing conditions. It is recommended that careful estimation of consumption be made prior to the execution of the work and to also make certain that sufficient material is kept in reserve. When injecting load bearing cracks in reinforced concrete structures, care must be taken to eliminate the load causing the cracks otherwise another crack in a different area of the concrete may appear
- Injection with synthetic resin compounds requires experienced specialists and trained workers

Value Base

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.

Health and Safety Information

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

Legal Note

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