BUILDING TRUST

PRODUCT DATA SHEET

Sikadur®-32 LP

Epoxy structural bonding agent for use at high temperatures

DESCRIPTION

Sikadur®-32 LP is a 2-part, epoxy based structural bonding agent for use at high temperatures. It is moisture tolerant and can bond wet or dry materials to damp or dry substrates.
Suitable to use in hot and tropical climatic conditions.

USES

Sikadur®-32 LP may only be used by experienced professionals.

As a structural bonding agent and adhesive for bonding fresh to hardened concrete.

FEATURES

- Application temperature range +20°C to +40°C
- Thickness up to 1 mm
- Easy to mix and apply
- Suitable for dry and damp concrete substrates
- Very good adhesion to many construction materials
- Hardens without shrinkage
- Different coloured parts (for mixing control)
- No primer needed
- High initial and ultimate mechanical strengths
- Impermeable to liquids and water vapour

CERTIFICATES AND TEST REPORTS

- CE Marking and Declaration of Performance to EN 1504-4 - Structural bonding

PRODUCT INFORMATION

Composition	Epoxy resin and selected fillers	
Packaging	1 kg ready to mix unit (Parts A+B) 5 kg ready to mix unit (Parts A+B) 25 kg ready to mix unit (Parts A+B) Refer to current price list for packaging variations.	
Colour	Part A	white
	Part B	dark grey
	Parts A+B mixed	concrete grey
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 +30°C. Always refer to packaging.	
Density	Mixed resin ~1.4 ± 0,1 kg/l Value at +23°C.	

TECHNICAL INFORMATION

Compressive strength (ASTM D 695-95)

Curing time	Curing temperature		
	+23°C	+30°C	+40°C
1 day	–	~2 N/mm²	~30 N/mm²
3 days	~14 N/mm²	~24 N/mm²	~41 N/mm²
7 days	~34 N/mm²	~38 N/mm²	~52 N/mm²
14 days	~39 N/mm²	~43 N/mm²	~56 N/mm²

Compressive strength at 4 % elongation

Shrinkage

Hardens without shrinkage.

Tensile adhesion strength (EN 1542)

Curing time	Substrate	Curing temperature	Adhesion strength
7 days	Concrete dry	+23°C	> 3 N/mm² *
7 days	Concrete moist	+23°C	> 3 N/mm² *

*100% concrete failure

Shear adhesion strength

≥ 10 N/mm² (at 28 days) (ASTM C882/C882M-20)

APPLICATION INFORMATION

Mixing ratio

Part A : Part B = 2 : 1 by weight or volume

Consumption

~1.3 kg/m² per mm of thickness.
This figure is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.

Layer thickness

~1 mm max.

Sag flow

Non-sag up to 1.0 mm thickness on vertical surfaces (EN 1799)

Material temperature

+20°C min. / +40°C max.

Ambient air temperature

+20°C min. / +40°C max.

Dew point

Beware of condensation.
Steel substrate temperature during application must be at least +3°C above dew point.

Substrate temperature

+20°C min. / +40°C max.

Substrate moisture content

Cementitious substrates must be dry or matt damp (no standing water). Brush the adhesive well into the substrate if matt damp.

Pot Life (EN ISO 9514)

Temperature	Potlife*	Open time
+20°C	~145 minutes	~270 minutes
+30°C	~55 minutes	~240 minutes
+40°C	~35 minutes	~120 minutes

*200 g
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).

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

- Sikadur® resins are formulated to have low creep under permanent loading. However due to the creep behaviour of all polymer materials under load, when using adhesive for structural applications, the long term structural design load must account for creep. Generally the long term structural design load must be lower than 20–25 % of the failure load. A structural engineer must be consulted for design calculations for specific structural applications.
- When using multiple units during application, do not mix the following unit until the previous one has been used in order to avoid a reduction in workability and handling time.
- For heavy components positioned vertically or overhead, provide temporary support.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Concrete / masonry / mortar / stone
Concrete and mortar must be at least 3–6 weeks old. Substrate surfaces 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 of the bonding agent.

Steel
Surfaces must be clean, dry, free from oil, grease, coatings, rust, scale, all loose particles and any other surface contaminants that could affect adhesion of the bonding agent.

SUBSTRATE PREPARATION

Concrete / masonry / mortar / stone
Substrates must be prepared mechanically using suitable abrasive blast cleaning, needle gunning, light scabbling, bush hammering, grinding or other suitable equipment to achieve an open textured gripping surface profile.

Steel
Surfaces must be prepared mechanically using suitable abrasive blast cleaning, grinding, rotating wire brush or other suitable equipment to achieve a bright metal finish with a surface profile to satisfy the necessary tensile adhesion strength requirement. Avoid dew point conditions before and during application.

All substrates
All dust and loose material must be completely removed from all substrate surfaces before application of the product by vacuum / dust removal equipment.

MIXING

Prior to mixing all parts, mix part A (resin) briefly using a mixing spindle attached to a slow speed electric mixer (max. 300 rpm). Add part B (hardener) to part A and mix parts A+B continuously for at least 3 minutes until a uniformly coloured smooth consistency mix has been achieved. To ensure thorough mixing pour materials into a clean container and mix again for approximately 1 minute. Over mixing must be avoided to minimise air entrainment. Mix full units only. Mixing time for A+B = 4,0 minutes. Mix only the quantity which can be used within its pot life.

APPLICATION METHOD / TOOLS

Apply the mixed Sikadur®-32 LP to the prepared substrate by brush, roller, spray or trowel ensuring uniform and complete coverage.
On hardened concrete substrates mechanically prepared to receive fresh concrete, always apply by brush and work the material well into the substrate.
On damp prepared concrete substrates, always apply by brush and work the product well into the substrate.

For bonding wet fresh concrete to hardened prepared concrete, place the concrete whilst the Sikadur®-32 LP layer is still ‘tacky’. If the product becomes glossy and loses 'tackiness', apply another coat of Sikadur®-32 LP and proceed to place concrete.

CLEANING OF EQUIPMENT

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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.