

PRODUCT DATA SHEET

Sikadur®-33

2-PART STRUCTURAL EPOXY ADHESIVE

PRODUCT DESCRIPTION

Thixotropic two part structural adhesive based on epoxy resin in a cartridge.

USES

As a structural adhesive for:

- Concrete elements
- Hard natural stone
- Ceramics, fibre cement
- Mortar, Bricks, Blocks, Masonry, render etc.
- Steel, Iron, Aluminium
- Wood
- Polyester, Epoxy

For concrete repairs Interior, vertical and overhead repair of:

- Corners and edges
- Hole and void filling
- Joint arrises

Joint filling and crack sealing:

- Crack filling and sealing (non-moving)

Metalwork, carpentry:

- Fixing and fastening of handrails, railings, balustrades and supports
- Fixing of window and door frames

For use in the following:

- Concrete
- Hard natural stone
- Solid rock
- Hollow and solid masonry
- Steel
- Wood

CHARACTERISTICS / ADVANTAGES

- Can be used on damp concrete
- Excellent adhesion to the substrate
- Non-sag, also overhead
- High load capacity
- Shrinkage-free hardening
- Styrene-free

APPROVALS / STANDARDS

Testing according to EN 1504-4.

PRODUCT INFORMATION

Chemical Base	Epoxy resin.		
Packaging	250 ml cartridge, 12 per box Pallet: 60 boxes with 12 cartridges		
Colour	Part A: white Part B: grey Part A+B mixed: grey		
Shelf Life	12 months from date of production if stored properly in undamaged and unopened. On each Sikadur®-33 cartridge the best before date is printed.		
Storage Conditions	Cool and dry conditions, at temperatures between +10°C and +30°C. Protect from direct sunlight.		
Density	1.35 kg/l (part A+B mixed)		
Compressive Strength	~50 N/mm ² (14 days, +23°C)		(According to EN 12190)
Flexural Strength	~20 N/mm ² (14 days, +23°C)		(According to EN 196)
Tensile Strength	10 - 15 N/mm ² (14 days, +23°C)		(According to DIN EN ISO 527-3)
Tensile Adhesion Strength	Time	Substrate	Bond strength
	After 3 days	Dry concrete	> 5 N/mm ² *
	After 3 days	Damp concrete	5 N/mm ² *
	After 3 days	Steel blast cleaned	> 10 N/mm ²
	After 3 days	Brick dry	> 1.5 N/mm ² **
	*100% concrete failure **100% brick failure		
Shrinkage	Hardens without shrinkage.		
Mixing Ratio	Part A : part B = 1 : 1 by volume		
Layer Thickness	0.5 mm min. / 10 mm max.		
Sag Flow	Non-sag, suitable for overhead application		
Ambient Air Temperature	+10°C min. / +35°C max.		
Dew Point	Avoid condensation during dew point conditions. Substrate temperature during application must be at least 3°C above dew point.		
Substrate Temperature	+10°C min. / +35°C max.		
Substrate Moisture Content	Substrate must be dry or mat damp (no standing water)		
Pot Life	60 minutes (+23°C)		
Curing Time	Temperature	Open Time	Curing Time
	+10°C	210 minutes	3 days*
	+20°C	90 minutes	2 days*
	+35°C	45 minutes	1 day*
	* to achieve approx. 80% of the performance Min. cartridge temperature +10°C		

SUBSTRATE QUALITY

Mortar and concrete must be older than 28 days. Adequate substrate strength (concrete, masonry, natural stone) must always be confirmed.

MIXING

Getting the cartridge ready

- Unscrew and remove the cap
- Pull out the plug
- Screw on the static mixer
- Place the cartridge into the gun and start application

Important note: When the work is interrupted the static mixer can remain on the cartridge after the gun pressure has been relieved. If the resin has hardened in the nozzle when work is resumed, a new nozzle must be attached.

APPLICATION METHOD / TOOLS

General Advice:

- Clean the substrate (free from oil, grease and dust, no loose or friable particles, no cement laitance).
- Pump approx. twice until both components start to come out uniformly. Do not use this material. Release the gun pressure and clean the end of the nozzle with a cloth.
- Apply the adhesive. Observe the open time.
- During curing / hardening the fixing must not be moved. Observe the curing time. Wash tools immediately with Sika® Thinner C. Wash hands and skin thoroughly with warm soap water afterwards.

Concrete, natural stone, cement mortar and render: Clean, free from oils and grease, no loose or friable particles, no cement laitance.

Age of concrete 3 to 6 weeks (dependent on mix design and environment).

Preparation: Blast cleaning or grinding.

Construction steel 37, V2 A steel:

Free from oil, grease, rust or mill scale. Preparation: Blast cleaning or grinding.

Avoid dew point conditions. If prepared steel is not to be used immediately, its surface must be coated with Sikagard®-62 to protect it.

Polyester, epoxy, ceramics:

Free from oils and grease. Polyester epoxy: Grind, using coarse abrasive.

Glass, ceramics: Grinding, do not apply to siliconised substrates.

SIKA LIMITED

Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited

SIKA IRELAND LIMITED

Ballymun Industrial Estate
Ballymun
Dublin 11, Ireland
Tel: +353 1 862 0709
Web: www.sika.ie
Twitter: @SikaIreland



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CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened / curdled material can only be mechanically removed.

LIMITATIONS

Sikadur® resins are formulated to have low creep under permanent loading. However due to the creep behaviour of all polymer materials under load, 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. Please consult a structural engineer for load calculations for your specific application.

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.

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.

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.

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.

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