

# PRODUCT DATA SHEET

## Sikadur<sup>®</sup>-31 SBA S-02 MY

### SEGMENTAL BRIDGE ADHESIVE

#### DESCRIPTION

Sikadur<sup>®</sup>-31 SBA S-02 MY is a solvent-free, thixotropic, epoxy resin based, structural two part adhesive specially formulated for segmental bridge construction. Suitable for use in hot and tropical climatic conditions.

#### USES

Sikadur<sup>®</sup>-31 SBA S-02 MY may only be used by experienced professionals.  
Segmental bridge adhesive for use on substrates at +30 °C to +50 °C.

#### CHARACTERISTICS / ADVANTAGES

- Easy to mix and apply
- Good adhesion to most construction materials
- Thixotropic: non-sag in vertical and overhead applications
- Hardens without shrinkage
- Different coloured components (for mixing control)
- No primer needed
- Abrasion resistant
- Impermeable to liquids and water vapour
- Chemical resistant
- Lubricates the surfaces and makes location of the shear keys easier
- High strength and high modulus of elasticity
- High initial and ultimate strengths
- Impermeable to liquids and water vapour
- Minimal water absorption
- Suitable for dry and damp concrete surfaces (moisture tolerant)
- Hardening is not affected by humidity

#### PRODUCT INFORMATION

<b>Composition</b>	Epoxy resin	
<b>Packaging</b>	<ul style="list-style-type: none"> <li>▪ 6 kg (A+B) Pre-batched unit</li> <li>▪ 12 kg (A+B) Pre-batched unit</li> </ul>	
<b>Colour</b>	Part A	White
	Part B	Dark grey
	Part A+B mixed	Concrete grey
<b>Shelf Life</b>	24 months from date of production	
<b>Storage Conditions</b>	Stored properly in original unopened, sealed and undamaged packaging, in dry conditions at temperatures between +10 °C and +30 °C. Protect from direct sun, heat and moisture.	
<b>Density</b>	2.0 + 0.1 kg/l (part A+B mixed) (at +23 °C) (evacuated)	

## TECHNICAL INFORMATION

<b>Compressive Strength</b>	1 day	~75 N/mm <sup>2</sup>	(FIP/9/2:1978, Clause 5.12)
	7 days	~87 N/mm <sup>2</sup>	
<b>Modulus of Elasticity in Compression</b>	Instantaneous Modulus in Compression	~8 860 N/mm <sup>2</sup>	(FIP/9/2:1978, Clause 5.13)
	Deferred Modulus in Compression (1 hour creep)	~7 930 N/mm <sup>2</sup>	
<b>Tensile Strength in Flexure</b>	100 % concrete failure		(FIP/9/2, Clause 5.14)
<b>Modulus of Elasticity in Shear</b>	Instantaneous Shear Modulus	~2 200 N/mm <sup>2</sup>	(FIP/9/2:1978, Clause 5.16)
	Deferred Shear Modulus	~1 700 N/mm <sup>2</sup>	
<b>Shear Adhesion</b>	1 day	~27 N/mm <sup>2</sup>	(FIP/9/2:1978, Clause 5.15)
	7 days	~37 N/mm <sup>2</sup>	
<b>Shrinkage</b>	~0.017 %		(FIP/9/2:1978, Clause 5.7)
<b>Heat Deflection Temperature</b>	~55.4 °C		(FIP/9/2:1978, Clause 5.10)

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	Part A : Part B = 3 : 1 by weight or volume		
<b>Consumption</b>	~2.0 kg/m <sup>2</sup> per mm of thickness		
<b>Layer Thickness</b>	20 mm max. When using multiple units, one after the other. Do not mix the following unit until the previous one has been used in order to avoid a reduction in handling time.		
<b>Sag Flow</b>	~9.5 mm thickness non sagging		(FIP/9/2:1978, Clause 5.3)
<b>Squeezability</b>	<b>Squeezing Load</b>	<b>Squeezability Area</b>	(FIP/9/2:1978, Clause 5.4)
	0.15 kN	~5 205 mm <sup>2</sup>	
	2.00 kN	~7 629 mm <sup>2</sup>	
	4.00 kN	~11 029 mm <sup>2</sup>	
<b>Product Temperature</b>	+20 °C min. / +50 °C max.		
<b>Ambient Air Temperature</b>	+30 °C min. / +50 °C max.		
<b>Dew Point</b>	Beware of condensation! Substrate temperature during application must be at least 3 °C above dew point.		
<b>Substrate Temperature</b>	+20 °C min. / +50 °C max.		
<b>Pot Life</b>	~59 min.		(FIP/9/2:1978, Clause 5.1)
	The potlife begins when the resin and hardener are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quantity mixed, the shorter the potlife.		
<b>Open Time</b>	> 75 min.		(FIP/9/2 March 1978, Clause 5.2 and 5.14)

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

Mortar and concrete must be older than 28 (depends on minimal requirement of strengths). Verify the substrate strength (concrete, masonry, natural stone). The substrate surface (all types) must be clean, dry and

free from contaminants such as dirt, oil, grease, existing surface treatments and coatings etc. Steel substrates must be de-rusted similar to Sa 2.5. The substrate must be sound and all loose particles must be removed.

### SUBSTRATE PREPARATION

### Concrete, mortar, stone, bricks

Substrates must be sound, dry, clean and free from laitance, ice, standing water, grease, oils, old surface treatments or coatings and all loose or friable particles must be removed to achieve a laitance and contaminant free, open textured surface.

### Steel

Must be cleaned and prepared thoroughly to an acceptable quality i.e. by blast cleaning and vacuum. Avoid dew point conditions.

### MIXING

Mix parts A+B together for at least 3 minutes with a mixing spindle attached to a slow speed electric drill (~300 rpm) until the material becomes smooth in consistency and a uniform grey colour. Avoid aeration while mixing. Then, pour the whole mix into a clean container and stir again for ~1 more minute at low speed to keep air entrapment at a minimum. Mix only that quantity which can be used within its potlife.

### APPLICATION METHOD / TOOLS

When using a thin layer adhesive, apply the mixed adhesive to the prepared surface with a spatula, trowel, notched trowel, (or with hands protected by gloves). When applying as a repair mortar, use some form-work.

When using for bonding metal profiles onto vertical surfaces, support and press uniformly using props for at least 12 hours, depending on the thickness applied (not more than 5 mm) and the room temperature. Once hardened check the adhesion by tapping with a hammer.

### CLEANING OF TOOLS

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

### BASIS OF PRODUCT DATA

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.

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### 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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