

PRODUCT DATA SHEET

Sikadur[®]-31 SBA Slow Set

Segmental Bridge Adhesive High-modulus, high-strength, moisture tolerant, epoxy paste adhesive

PRODUCT DESCRIPTION

Sikadur[®]-31 SBA Slow Set is a unique high-modulus 2-component, moisture-tolerant, solvent-free, epoxy resin system available in three application temperature ranges. A unique high-modulus, structural adhesive for bonding hardened concrete to hardened concrete for segmental bridge construction. The mixed material has the consistency of paste and is a concrete gray color. It conforms to the current ASTM C-881, Type VII requirements, and ASBI guidelines.

USES

Sikadur[®]-31 SBA Slow Set may only be used by experienced professionals.

- Structural bonding of post-tensioned precast concrete bridge segments
- Sealing joints between concrete segments
- Slow-set version for span-by-span erection
- Supplied in three temperature grades to meet project requirements. (For cold weather conditions, refer to separate technical data sheet on Sikadur[®] 31, SBA [20°-45°F].)

CHARACTERISTICS / ADVANTAGES

- Moisture tolerant before, during and after cure
- High-modulus, high-strength, structural paste adhesive
- Range of curing times to meet assembly and strength gain requirements
- Easy to apply, non-sag paste for vertical applications
- Excellent adhesion to concrete, steel and most construction materials
- Convenient easy to mix ratios
- Color-coded components to ensure proper mixing control

PRODUCT INFORMATION

Packaging	3 gal. (11 L) units
Color	Concrete gray
Shelf Life	24 months in original, unopened containers
Storage Conditions	Store dry at 40–95 °F (4–35 °C). Condition material to 70–75 °F (21–24 °C) before using.
Consistency	Non-sag paste

Compressive Strength	ASTM C-881 Spec.	SBA SS 40–61	SBA SS 55–75	SBA SS 70–90	(ASTM D-695)
		°F (4–16 °C)	°F (13–24 °C)	°F (21–32 °C)	
36 hours		1,800 psi (tbd MPa)	3,000 psi (20.7 MPa)	6,400 psi (tbd MPa)	
72 hours		4,500 psi (31.0 MPa)	6,500 psi (44.8 MPa)	9,000 psi (62.1 MPa)	

Slant Shear Strength	ASTM C-881 Spec.	SBA SS 40–61	SBA SS 55–75	SBA SS 70–90	(ASTM C-882)
		°F (4–16 °C)	°F (13–24 °C)	°F (21–32 °C)	
1000 psi		1800 psi	2000 psi	2300 psi	

Heat Deflection Temperature	ASTM C881 Spec	SBA SS 40–61	SBA SS 55–75	SBA SS 70–90	(ASTM D-648)
		°F (4–16 °C)	°F (13–24 °C)	°F (21–32 °C)	
> 120 °F (49 °C)		> 122 °F (50 °C)	> 124 °F (51 °C)	> 124 °F (51 °C)	

APPLICATION INFORMATION

Mixing Ratio	Product name	Temperature Range	Mix Ratio
	Slow Set (40–61 °F, 4–16 °C)	40–61 °F (4–16 °C)	2:1, A:B by volume
	Slow Set (55–75 °F, 13–24 °C)	55–75 °F (13–24 °C)	2:1, A:B by volume
	Slow Set (70–90 °F, 21–32 °C)	70–90 °F (21–32 °C)	2:1, A:B by volume

Coverage	Approximately 12 ft ² /gal. or 36 ft ² ./3 gal. unit
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Pot Life	ASTM C-881 Spec.	SBA SS 40–61	SBA SS 55–75	SBA SS 70–90	(ASTM C-881)
	°F (4–16 °C)	°F (13–24 °C)	°F (21–32 °C)		
-		~2 hours	~2 hours	~2 hours	

Open Time	ASTM C-881 Spec.	SBA SS 40–61	SBA SS 55–75	SBA SS 70–90	(ASTM C-881, contact strength after open time 8 hours)
	°F (4–16 °C)	°F (13–24 °C)	°F (21–32 °C)		
14 days		1,500 psi (10.3 MPa)	2,500 psi (13.8 MPa)	1,500 psi (10.3 MPa)	

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Surface must be clean and sound. It may be dry or damp, but free of standing water and frost. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles, disintegrated materials and any other contaminants.

MIXING

Pre-mix each component. Wear chemical resistant gloves and safety goggles. Mix all of Part 'A' with all of

Part 'B'. Mix thoroughly for a minimum of 3 minutes with a low-speed (400–600 rpm) drill fitted with a mixing Sika paddle until a uniform gray color is achieved. Scrape down the sides of the mixing pail and ensure there are no streaks of unmixed epoxy before applying. Mix only that quantity which can be used within its pot life.

APPLICATION METHOD / TOOLS

Apply the neat mixed Sikadur® 31, SBA Slow Set to the concrete surface using a trowel, spatula or glove protected hand; work into surface, especially if it is damp. Spread to a thickness of 1/8" (3 mm) to one face or 1/16" (1.5 mm) on both faces, depending upon

project requirements. Segments must be post-tensioned within the open time of the epoxy.

LIMITATIONS

- Do not thin Sikadur®-31 SBA Slow Set. Solvents will prevent proper cure
- Use correct temperature range material for prevailing conditions
- Use correct setting material (normal or slow) depending on method of erection
- Not for use as an adhesive for fresh, plastic portland cement concrete or mortar
- Lower temperatures will prolong cure time. Higher temperatures will rapidly accelerate cure time
- Use of product outside of designated temperature range is not recommended
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its

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Product Data Sheet

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subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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